ARCHÆOLOGICAL SURVEY OF INDIA



ANNUAL REPORT 1916-17
PART I

ANNUAL REPORT

OF THE

ARCHÆOLOGICAL SURVEY OF INDIA

PART I, 1916-17.

BY

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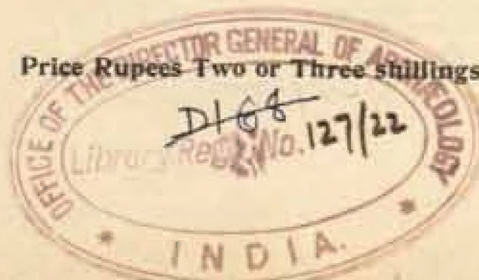


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LIST OF PLATES.

NOTICE.

The Government of India have decided that after the publication of the Annual Report, Part II, for 1915-16, the issue of Part II in its present form shall cease, and its place be taken by detached memoirs.

Annual Report of the Director-General of Archæology for the year 1916-17.

PART I.

Conservation. Expenditure.

EXPENDITURE on conservation in British India during 1916-17 amounted in the aggregate to Rs. 2,99,491. This sum was not far short of the previous year's expenditure, and the small decrease of Rs. 16,819 did not materially affect the work of the Department. The provincial grants, however, during the last two years have fluctuated to an extent which necessarily renders a consistent programme of work very difficult and in some cases impracticable. In the Northern Circle, for example, expenditure was reduced from Rs. 99,184 in 1915-16 to Rs. 72,242 in the year under review. On the other hand, in Bengal seven times as much has been spent this year as in the preceding year, in Bihar and Orissa nearly twice as much, and in Burma three times as much. Drastic economy is, of course, imperative in every sphere of work at the present time ; but in dealing with ancient monuments it is no economy to neglect them for a year or two and then spend twice as much as would otherwise have been necessary in making up for the neglect. How costly such a policy may be is well illustrated by the case of the Mandalay Palace in Burma. When the war broke out in 1914, the Local Government decided to save money by dismissing the Public Works' Overseer in charge of the building, and in other ways also reduced the annual charges below the minimum required for its adequate maintenance. Thereby a few thousand rupees were saved. But two years later, when the Palace was required for Durbar, it was found that a sum of Rs. 25,000 had to be hastily spent in making good the neglect of the past. Possibly some extra outlay would in any case have been necessary on the occasion in question, but I think I am right in saying that in the long run the Local Government has had to spend more than it need have done, had the effect of its economies been foreseen. What is wanted in all these cases is for the Local Government to make up its mind once and for all what is to be done with the monuments, to map out a definite plan of conservation, and not afterwards chop and change this plan from year to year. So far as the Mandalay Palace and the *pyatthats* are concerned, there is no question as to the obligation devolving on Government to conserve them. The only question is, how this obligation can best be discharged ; and hitherto the method of answering this question has been neither economical nor effective.

Burma.

With the monasteries the case is different. They were built by the two last kings of Mandalay or their relatives, and several of them are superb examples of Burmese wood carving, which is now so rapidly dying out. Since they were taken over by the Public Works Department, a few repairs have from time to time been effected, mainly in the direction of making them rain proof ; but the annual allotments have been far

too meagre to permit of a systematic scheme of conservation, and the condition of all of them is now considerably worse than that of the Palace. Were these buildings in Government possession, I should have no hesitation in urging that two or three of the finest specimens should be selected for permanent conservation. But they are not the property of Government, and the difficulty is that one and all of them are still tenanted by Buddhist monks, and that there is an ever present danger of fire. Since the British occupation in 1885 many of these wooden structures have perished by the flames, and it is only too likely that the same fate will sooner or later overtake the rest. So long, therefore, as they continue to be used for habitation, it is clearly open to question whether any money ought to be spent on them as antiquarian monuments. On the other hand, it must be borne in mind that the British Government has taken the place of the former royal dynasty of Mandalay, and it may be that there are good political reasons for maintaining the monasteries which were maintained by Kings Mindon and Thibaw and their relatives.

Eastern Circle.

In spite, however, of recent uncertainties in the matter of provincial expenditure, the year's record of conservation has, on the whole and considering the exigencies of the times, been a reasonably good one. In Bengal, the more liberal provision made by the Local Government rendered possible the special repair of a number of historic monuments that were in urgent need of attention: namely:—of the Chika Masjid at Gaur, of the Satgumbaz Masjid at Bagerhat; of the Adina Masjid at Pandua; of the mosque of Khan Jahan Ali at Masjidkur and of 20 Hindu Temples at Guptipara, Kenduli, Vishnupur and in the Sundarbans. In Bihar and Orissa, the most important achievement was the conservation of the Tomb of Bakhtiyar Khan at Chainpur, on which a sum of Rs. 11,543 was expended. In the Central Provinces, fourteen monuments were under special repairs, of which the most noteworthy were the Forts at Chanda and Balapur, the Mahadeo temple at Gandai, the Sibdole temple at Gaurisagar, the tombs of Nadir Shah at Burhanpur and of Shah Gohar at Asirgarh.

Northern Circle. Delhi.

At the Kotila of Firoz Shah, near Delhi, further progress was made in conserving the more dangerous fabrics in the south-east quarter of the ruins; and at the Purana Qila in underpinning and repointing the decaying masonry of the exterior walls. In the latter fortress, too, iron gangways were provided at the Humayun and Talaqi gates to connect the adjoining *dalans* with the central bay of the gates across the deep wells which intervene between them, and in the central bay of the Qila'i Kuhna Masjid a dangerous bulging jamb was dismantled and rebuilt. At Badli-ki-Sarai the conservation measures referred to last year were continued, and in the Bu-Halima garden, near Humayun's Tomb, a tile-decorated *chhattri* over the bastion in the north-east corner was put into repair, and a railing erected to close the modern but now disused approach in front of the Arab Sarai gate. At the Bijai Mandal, a massive structure in the Firoz Shahi style, attention was given to the western wall, which had partly collapsed during the monsoon; and at the Hauz Khas a footpath was made to connect this interesting group of monuments with the already existing path along the *band* approach from the Delhi-Qutb road.

In the Fort of Shahjahanabad a few small improvements were effected by the reconstruction of the missing east end of the water channel and causeway in the Hayat Bakhsh garden, by the provision of red sandstone seats of a suitable Mughal design for

the convenience of visitors, by levelling the *bajri* paths, and by replanting the trees throughout the southern half of the gardens on symmetrical lines in keeping with the formal character of the design, the existing trees in most cases being left until the new ones have grown up sufficiently to take their places. In the pits sunk for the new trees in front of the Rang Mahal there was disclosed, at a depth of about 4 feet below the present ground level, a curious vault-like structure of concrete, which proved to be part of the old drainage system laid in the Fort by the Mughals. The drains themselves were of brick and of extraordinarily strong construction, a casing some three feet thick of solid brickwork being used to enclose a pipe of no more than nine inches diameter.

Lastly, at the Qutb, a new entrance was opened up towards Mehrauli; the late Mughal garden and tomb at the north-east corner of the enclave were acquired; and some further excavation was carried out in the rear of Altamsh's Tomb, leading to the discovery of several new items of interest. It is worthy of mention that, in the course of these excavations, there came to light a number of fragments of early blue-glazed tiles of geometric design approximately contemporary with the adjoining buildings. Tiles of the same kind were also recovered during General Cunningham's excavations at the Qutb in 1871, and again during Mr. Sanderson's excavations in 1913. Similar fragments are occasionally found within the area of Qila Rai Pithora, and there can be little doubt that this particular kind of tile-work was extensively used for the decoration of early Muhammadan structures.

Panjab.

Of the Hindu and Buddhist Monuments in the Panjab which came in for special attention, the most important were, the Fort of Kangra, where urgent structural repairs were carried out to the archway and jambs of the main gateway, and the recently excavated remains of Taxila, the effective preservation of which involves among other measures the construction of approach roads, grading and drainage of the excavated areas, strengthening and waterproofing of decaying masonry, and in some cases the erection of considerable expanses of roofing, for the protection of the exposed sculptures and other antiquities against the weather.

Among Muhammadan monuments in this Province that were under repair, the most noteworthy were those at Sheikhupura, once a hunting seat of the Emperor Jahangir and afterwards of his grandson, Dara Shikoh. Here, rapid headway was made in the conservation of the great tank and Haran Munara, the badly ruined *ghat* on the south side of the tank being thoroughly repaired, and the long parapet surrounding it put in order. The *baradari* illustrated in Plate I *a* is one of the corner *baradaris* which had half collapsed through a subsidence in the ground, and has now been reconstructed and put into a sound condition (Plate I *b*). In the time of Jahangir, Sheikhupura was known as Jahangirabad, and the great minar here, was erected, as the Emperor himself states in the *Tuzuk*, to commemorate a favourite antelope. At Lahore, the repair of the grave believed to be that of Qutb-ud-Din Aibak, the first Muhammadan King of Delhi, who met his death playing polo in 1210, was completed, the cost being met by the owner, Bakhshi Tek Chand; and another famous tomb in the same city which also received attention was that of Ali Mardan Khan, the well-known Persian architect of Shah Jahan, who is believed to have been largely instrumental in introducing the bulbous Tartar dome into general use in Indian architecture. A third and more modern grave hitherto neglected but now to be commemorated by the erection of a simple pillar

and tablet, is at Ramnagar in the Gujranwala District. This is the grave of Subadar-Major Mir Sher Ali, Sardar Bahadur, of the 8th Light Cavalry, who at the age of 78 fell in the battle of Ramnagar, on the 22nd November 1848, against the Sikhs.

United Provinces. At Agra, some improvements were effected in the Fort and at the Taj Mahal, in the former by screening with creepers the ugly brick walls on the north of the Akbari Mahal Court, and in the latter by the judicious removal of superfluous trees and shrubberies and by opening up new vistas in and around the gardens. At Sikandarah, the early Mughal tomb known as Dhakri-ka-Mahal (Plate II *a*) was thoroughly overhauled and repaired, and at Fatehpur Sikri the tomb of Sheikh Bahau-d-Din (Plate II *b*), near the Tehra Darwaza, is undergoing a like process. Sheikh Bahau-d-Din, it may be mentioned, is generally reputed to have been the architect of Akbar's palaces in Fatehpur Sikri, but from an inscription in the masjid attached to his tomb it appears that his rôle was the more modest one of *darogah*, or manager, of the Imperial chunam-works. At Jaunpur, the ruined south gateway of the Fort was partially renovated and fitted up to receive the many carved stones lying about uncared-for in the vicinity, and in the same city a start was made in the conservation of the old cemetery, known locally as the 'Tombs of the Seven Kings,' and believed to contain the graves of certain Sultans of the Sharqi Dynasty. Other monuments of an earlier date in the United Provinces which came in for urgent repairs were the temple of Sitaramji at Soron in the Etah District, the remarkable brick temple at Bhitargaon in the Cawnpore District, the temples at Dwarahat in the Almora District and the group of Buddhist remains at Sarnath near Benares, where a methodical and comprehensive scheme of conservation is to be carried out.

Western Circle. Of the important campaign of work that has recently been started amid the vast ruins of Champanir in the Panch Mahal District, I spoke in my last report. This year, the somewhat dangerous work of replacing old fractured lintels by new ones beneath one of the domes on the Bohra-ki-Masjid, and of rebuilding the corner of the Rauza at the Mahuda-ki-Masjid, which was threatening to collapse, has been successfully accomplished and reflects much credit, be it said, on the Public Works' officers concerned. The side abutments and return walls of the Godhra Gateway in the same city have also been dismantled and reconstructed, and a number of broad pathways made to the various monuments. Other buildings of note in the Bombay Presidency that have been under special repair are the Ibrahim Rauza at Bijapur, where the cracked arches of the verandah have been sustained by relieving arches; the Jami Masjid at Broach, where the central water tank has been dismantled and open joints in the *chhajja* and central dome made good; Bahlol Khan Kazi's Mosque at Ahmedabad, where voussoirs have been renewed and the roof extensively repaired; and the temples of Chandramaulesvara at Unkal and of Gondesvara at Sinnar, both of which have required the insertion of masonry or metal supports and various other structural measures.

With regard to the last mentioned building—the Gondesvara Temple at Sinnar—the Archæological Superintendent, Western Circle, reports that the wilful damage done to this monument in 1913 was again repeated during the year under review, some of the idols, which had been previously damaged and repaired in the meantime, being again broken and other mischief done to the interior carvings. Notwithstanding that the temple is situated close beside their lines, the police have hitherto failed to trace the

culprits. Another case of damage reported in the Bombay Presidency was that done to the caves and temples of Badami, Aihole and Pattadakal by a number of poor people who had been rendered homeless by the floods and who sought refuge inside the ancient monuments. In this case the mischief was mainly due to the fires lit inside the buildings or to scribbling with charcoal on the walls.

Southern Circle.

In his provincial report on conservation works in the Madras Presidency, Mr. Longhurst dwells at some length on the pressing need of improved roads and pathways to many of the ancient monuments in the Presidency, as well as of reasonably good rest-houses for visitors. " With the exception," he says, " of the famous temples at Tanjore, Madura, Trichinopoly and Ramesvaram, which happen to be situated on the railway and provided with good accommodation for visitors, the most interesting and valuable groups are located in remote parts of the Presidency and are difficult of access owing to the bad state of the District roads. Unless good roads and resthouses are provided, pilgrimages to these monuments can never become popular with the public, nor can full advantage be taken of them as educational media. It is for this reason that considerable improvements have already been carried out at the Hampi ruins, at the Seven Pagodas, and at Gingee ; and the same policy will be adopted elsewhere as funds permit. During the last two years, also, a number of private motor-bus services have been established between some of the up-country towns and the railways, and it is possible that these services also may be the means of encouraging the public to visit places of historic interest more frequently than they used to."

What is true of the Madras Presidency is true, also, of most other parts of India. On all sides Indians are taking an ever increasing interest in the monuments of their country, and Government is anxious to foster this interest both by encouraging the general public to visit them and by giving special facilities to professors and their students. But to this end the first and most important step, after the monuments themselves have been saved from decay, is to provide means of access and convenient accommodation. Even at sites where a *dak* bungalow exists, it is not as a rule suitable for the housing of a party of students. What would be far more useful at out-of-the-way sites, such as Taxila, would be a simple *sarai* with 20or 30 rooms, well kept and scrupulously clean, and reserved in part for Hindus, in part for Muhammadans, a small charge of, say, four annas a day being made for their occupation. At present, there are many historic monuments which Europeans find it easier to visit than Indians ; but it is Indians who have primarily to be considered in this matter ; for it is they who necessarily derive the greatest educational value from them.

Native States.
Nizam's Dominions.

In the Native States, much good conservation work has been done, especially in His Exalted Highness the Nizam's Dominions, in Gwalior and in Kashmir. The comprehensive programme of conservation which had been planned during the preceding two years for the more important monuments of the Dekhan, has been energetically pushed forward at Ellora, Daulatabad, Aurangabad, Anwa, Ajanta, Bidar, Gulbarga and Oosmanabad. Another fine group of temples that has also been overhauled during the past year by the Archæological Superintendent, Mr. Yazdani, is that at Palampet and Uparpalli in the Warangal District—places that are far off the beaten track and consequently but little known to the general public. These temples (Plate IV *a*) are remarkable no less for their symmetry than the grandeur of their proportions, and there can

be no doubt that the architects who designed them must have been men of lofty ideals and great breadth of vision. This is abundantly evident in the massiveness of their plinths, in the spaciousness of their halls, in their lofty pillars and majestic spires. The style which they illustrate is the later 'Chalukyan' style of the Dekhan in its most mature and richest phase, and they therefore constitute an important landmark in the history of Indian architecture. In Hyderabad and its suburbs, the outstanding feature of the year's work was the survey of the historical monuments in the Golconda Fort. A map of all the buildings of archæological value has been prepared, and the buildings themselves are soon to be put into an efficient state of repair.

As regards the famous frescoes of Ajanta the task of preserving them is complicated by many difficulties, and I have been at pains to obtain on behalf of His Exalted Highness the Nizam's Government the best advice that can be had from experts in Europe before the work is taken up. For the treatment of such frescoes is an exceptionally delicate matter, and it has happened in only too many cases that irretrievable damage has been done owing to hasty or ill-advised measures. Indeed, some of the Ajanta frescoes themselves have unquestionably deteriorated since they were varnished some years ago by the late Mr. Griffiths. Whatever, therefore, is done to preserve them must be done only with the utmost caution and after the most patient and exhaustive experiments. Briefly, the technique of these frescoes is as follows :—The surface of the rock, which is volcanic and hard, was overspread with a layer of clay, cow dung and pulverised trap rock to which husks of rice were sometimes added. This first layer varies from $\frac{1}{8}$ to $\frac{3}{4}$ inch in thickness. Over it was laid a thin coat of fine white lime plaster, which was kept moist while the colours were applied and trowelled over when the painting was complete. Now, the stucco being applied on to the surface of the living rock, it is impossible to remove it by dismantling the wall behind. Nor do I think that it would be safe to attempt to remove it by the process which the Italians call *a strappo*, *i.e.*, 'tearing off.' On the other hand, the problem of preserving the frescoes intact on the rock is an exceedingly difficult one, for portions of them have peeled away from the rock and left hollow spaces behind, with the result that there is a constant danger of further breakages occurring, and this mischief is accentuated by the insects which collect in the hollow spaces. Moreover, the surface of the frescoes is in a friable state, and in some places the film of paint is parting from the lime and the layer of lime from the mud underneath. Thus, there have been three main problems for solution. The first of these was to find a suitable cement which could be used in liquid form as grout for injecting into the hollow cavities, the conditions requiring that it should not set too rapidly, that it should not expand on setting, that it should be free from any properties which could conceivably be harmful to the paintings, and, finally, that it should stand a temperature varying between 50° and 110° Fahrenheit. The second problem was to clear away the insects and foreign matter accumulated in the hollow spaces behind the frescoes and effectually prevent the former from returning. The third problem was to find means of consolidating and hardening the surface of the frescoes without damaging the pigments. With regard to the first of these problems I first consulted several high authorities in England, but was unable to obtain any other suggestion beyond the use of ceresin. Among the Italian experts, however, whose advice I subsequently obtained through the good offices of the Marquis Medici di Marignano, there was a consensus of

opinion that the most suitable cement, in every way, would be a mixture of casein or casein glue and slaked lime which can be used in liquid form or made into a paste of the requisite density by the addition of clay or marble powder. As to the second problem, it has been found possible to clear the hollows of insects by the use of a specially designed air pump, but it is manifest that, if the casein mixture is eventually to be adopted, a poison will have to be mixed with it, to destroy the insect life; for casein forms a very palatable and nourishing food, and were it to be used at Ajanta as it is used in Italy it would undoubtedly do more harm than good.

As to the third of the problems, *i.e.*, the strengthening of the surface of the frescoes, a variety of methods have been recommended by the Italian experts, *e.g.*, the use of mastic gum and turpentine applied with a spray, (*b*) a coating of paraffin dissolved in benzin and (*c*) the fixing of the pigment film with silicate of potash. Any of these processes must, needless to say, be carried out by a very experienced hand, and it is not proposed to touch the surface of the frescoes until a qualified expert has been brought out from Italy. Meanwhile, however, temporary measures are being taken by the Archæological Superintendent to prevent any of the frescoes breaking away from the walls.

Gwalior.

In the Gwalior State the conservation of two important groups of monuments has been brought to completion, namely, the monastery and temples in the Surwaya Fort and Gujari Mahal at the foot of the Gwalior Fort. The measures taken in the Surwaya Fort were described and illustrated in my last report; and it only remains to add that the ground enclosed in the Bale Qila and the surrounding slopes have now been turfed, the entrances repaired and provided with suitable doors, the bastions of the outer wall cleared of jungle and rubbish, footpaths made through the ruins, and a custodian and *mali* appointed to look after them. At the Gujari Mahal (Plate IV *b*) the whole of the western retaining wall which had buckled forward has been dismantled and rebuilt, the ugly modern rubble over the arched façade of the hall on the south side of the court has been replaced by neatly dressed masonry; the loose and decaying tilework on the exterior of the east and south walls has been refixed, the great drain to carry off water from the hill slopes above has been completed; and the outer portal leading to the Mahal, which was in a precarious state, has been largely dismantled and rebuilt. Another project of importance that was also carried out by the Gwalior Darbar was the clearance of jungle and deep accumulations of rubbish from the Koshak Mahal at Fatehabad near Chanderi, a spacious and imposing building in the Mandu style, now unfortunately much dilapidated.

Mt. Abu.

At Mount Abu the Jain authorities have shown themselves very ready to accept our advice in the repair of the Dilwara Temples. They intend—and the idea is certainly not an unreasonable one—to continue to beautify these famous shrines by the restoration of any missing members, but they are no longer going to replace old work by new, and the public, therefore, may rest assured that in future every scrap of the original fabric that can be saved, will be saved. As regards the new work, too, they have already endeavoured to remedy the defects pointed out by the Archæological Department and in other respects are striving to make the work as perfect as possible.

Kashmir.

To the important and costly work of restoring the Jami Masjid at Srinagar I referred in my last report, and I there explained the arrangements that had been made

for the execution of the work by Mr. Th. Avery under the control of the State Engineer, Colonel H. A. D. Fraser, R.E., who had generously offered his help in the matter. These arrangements have proved eminently successful, and during the past year, rapid and admirable progress has been made in the repair of the masonry and brickwork, as well as, in the reconstruction of the roofs and the timbering of the colonnades. Mr. Avery is much to be congratulated on the skill with which he has devised and set up the requisite machinery for his work, among other things for turning on the lathe the ends of the great deodar pillars fifty feet in length and thus obtaining for them a perfectly true bed; and he is to be congratulated no less on the excellent quality of the bricks which his newly started brick fields near Pandrethan are producing. As regards the lines on which the restoration of this historic mosque is being carried out, a word or two of explanation is desirable. The Jami Masjid is not to be regarded merely as an ancient historic monument. It is the chief ceremonial mosque in Kashmir, and it was primarily for its maintenance as a place of worship that the Moslem community subscribed so liberally for its repair, though they were willing and anxious to save as much as possible of the old fabric and to avoid modernizing it by any unnecessary additions. This being so, it was impracticable to treat the mosque as a monument no longer in use might have been treated. The roofs of the halls and *dalans* had collapsed and there was no alternative but to rebuild them completely, and necessarily on more economical and structurally sounder principles than those adopted by the original builders. The woodwork of the interior too, which was almost equally decayed, has had to be extensively restored, and the walls within and without have had to be provided with new foundations and nine-tenths of them rebuilt. At the same time, wherever a piece of carved timbering or a section of the walling could possibly be saved, it has been saved, and the most scrupulous care has been taken to match the new work with the old in every particular, so as to perpetuate the character of the original monument, though it is no longer possible to perpetuate much of the original material. Among other historic monuments in Kashmir which have been under repair during the past year I need mention only the famous Nishat Bagh, the enclosing walls of which had fallen in several places and have now been renovated by the Archæological Superintendent.

Ancient Monuments Act.

The number of monuments declared "protected" under the Act amounted to 54 in Bombay, 7 in the United Provinces, 2 in the Panjab and 1 in the Frontier Province. The question of protecting 35 others in the United Provinces was under the consideration of the Local Government, and in the Bombay Presidency negotiations for agreements under the Act were opened by the Collectors in the case of 23 monuments. Notifications under Section 3 (1) of the Act were withdrawn in respect of two monuments only, *viz.*, one in the Jaunpur District of the United Provinces and the other in the Muzaffargarh District of the Panjab. The effort made by the Local Government to acquire the Kanishka Chaitya and Monastery at Shahji-ki-dheri in the Peshawar District proved ineffectual, as the owners could not be persuaded to accept any reasonable terms.

Besides the cases of wilful damage referred to on page 5 above, some injury was done, presumably by a visitor, to the Asoka pillar at Sarnath. In another case, serious damage that might have been done to the Gol Gumbaz at Bijapur, by blasting opera-

tions in its immediate vicinity, was fortunately averted by the prompt action of the Executive Engineer and the Archæological Superintendent.

Two questions of considerable interest that have lately arisen in connexion with the administration of the Ancient Monuments Preservation Act, concern the right of access guaranteed to the public under Section 15. The questions at issue were : (1) whether a monument having been declared protected, and no rules under the Ancient Monuments Act having been issued, the public has a right of access to such monument at all times and without restriction ; (2) what kind of restrictions can legally be imposed by rules issued under the Act, *e.g.*, whether beggars and other undesirables can be excluded from a protected monument, or whether a protected monument can be closed to the public at night. In the opinion of Government, the mere issue of a notification under Section 3 of the Act does not make the monument a " monument maintained by the Government under this Act," within the meaning of Section 15 (1). The only monuments which would come within these words are :—(*a*) those in respect of which an agreement has been made between the Collector and the owner under Section 5, when the Collector has by the terms of the agreement undertaken the maintenance of the monument ; (*b*) those over which the Collector has acquired rights under Section 4 ; and (*c*) those which the Local Government has acquired under Section 10. In both of these two last cases the Commissioner has the duty of maintenance cast upon him by Section 11.

As regards the second question, under Section 15 (1) the public has a right of access to monuments referred to under (*a*), (*b*) or (*c*) above, but it is still only a limited right of access, that is, subject to rules, and any rules can be made which are fairly required for the preservation of the monument. The general rule-making power is contained in Section 23 which authorises rules " for carrying out any of the purposes of this Act." Preservation of the monuments is the general object of the Act. Any rules, therefore, would be justified which are reasonably required for preservation. This test applies to rules under Section 15 as much as to any other part of the Act. If a particular monument does not come within the classes (*a*), (*b*) or (*c*) above, Section 15 of the Act confers no right of access on the public at all.

Listing of Monuments and Surveying.

In the Delhi Province the preliminary lists of monuments in the Delhi *Zail* drawn up by the Assistant Superintendent have been finally checked prior to their publication, and the Mehrauli *Zail* has been taken in hand. Here, some 54 monuments have been listed, including 9 mosques, 15 tombs, 11 graves and 19 miscellaneous buildings. This part of the Province is exceptionally rich in archæological remains, inasmuch as it embraces the Lal Kot, Qila Rai Pithora, Tughlaqabad and Jahanpanah, and most of the monuments here are of great historical and archæological interest. In the new province of Bihar and Orissa the work of taking photographs needed for the compilation of the list of monuments made good progress in the hands of the temporary staff appointed for the purpose, some 340 new negatives being prepared during the year. The activities of the staff were chiefly confined to the Districts of Patna, Gaya, Monghyr and Shahabad. As to the two former districts, the information now available may be regarded as complete and the work in the two latter is well in hand. In the Mardan and Swabi Tahsils of the Frontier Province more than a hundred monuments were examined, and in Burma the archæological survey of Pagan made further headway.

In the Southern Circle the list of selected remains in the Province of Coorg, drawn up as far back as 1893, was revised and brought up to date.

Among the Native States, good work in the matter of listing was accomplished in Gwalior, where upwards of 300 monuments were catalogued by the State Archæologist, Mr. Garde. They comprise rock-cut caves and images, temples, forts, Hindu and Muhammadan tombs, mosques, inscribed memorial pillars, and loose antiquities. In Rajputana, Dr. Sukthankar, Assistant Superintendent in the Western Circle, resumed the work which had been in abeyance for the last six years and made further headway in the investigation of the antiquities of Sirohi State. Here, apart from other discoveries, including that of the Temple at Varman mentioned below, he was successful in tracing out a considerable body of epigraphic records of the late mediæval period, which are likely to be of considerable value in building up the history of the chiefs of Abu for a period of nearly 300 years, *viz.*, from the middle of the 11th to the middle of the 14th century.

Exploration: Taxila.

In present conditions all exploration work is necessarily proceeding very slowly and at Taxila there have been other reasons besides paucity of funds to impede it. One of these is lack of labour, more than half of my workmen having already joined the army; another is the need of conserving the monuments unearthed; for conservation must necessarily keep pace with excavation, and it would manifestly be wrong to lay bare any monuments which could not be effectively preserved for posterity. As a fact, the preservation of these ruined buildings, built as they largely are of rubble and with no more durable building material than mud, is often a matter of great difficulty; and this difficulty is immeasurably increased when the walls are adorned, as they are at Mohra Moradu and Jaulian, with fragile and delicate plaster reliefs which have to be handled with the utmost caution and protected from the elements by the erection of solid and permanent roofs. Hence it is that at the Dharmarajika stupa only a few more subsidiary buildings have been cleared, chiefly on the northern side of the site, while in the city of Sirkap the main achievement of the year has been the partial clearance of the North Gate of the city and four more blocks of buildings on either side of the High Street. When its excavation is complete, the North Gate of Sirkap and the adjoining fortifications will probably afford as much interest as anything in the city, especially as this is the only example of a city gateway of the early period that has yet been brought to light in India. At present the digging is not complete enough to make the disposition of the defences entirely clear, but it already seems evident that the Main Gateway must have been masked on its outer side by a barbican, and that the barbican was pierced by a second gateway set at right angles to the main one. To the west of the gate and against the inner face of the wall is a range of substantially built rooms which we may assume to have been occupied by the guard; and on the opposite side of the High Street are the remains of one of the ramps by which the defenders could mount on to the wall. Immediately inside, as well as outside, the gateways, the gradient must always have been a steep one, and as the level of the ground inside the city rose, it became steeper and steeper, necessitating the construction of a deep drain to carry off the rush of water. During the latest period of the city's occupation this northern entrance appears to have been closed, and there are the remains of various walls, and apparently of stupas also, erected in the actual gateway

Apart from this very limited digging in Sirkap and at the Dharmarajika stupa, fresh ground was broken at what has proved to be a remarkably fine group of Buddhist monuments higher up the Haro valley. This newly discovered group is perched on the top of a hill some 300 feet in height, about a mile to the north-east of Mohra Moradu and about half that distance from the village of Jaulian. The remains comprise a monastery and two stupa courts, an inner and an outer, the former raised a few feet above the latter (Plate V *a*). In the middle of the inner court stands the Main stupa, with numerous smaller stupas set in close array on its four sides, and round about the walls of the court are rows of small chapels, whence images of the Buddha or the Bodhisattvas could look upon the sacred structure. The original fabric of the main stupa probably dates from Kushan times, but the masonry now visible and the stucco figures with which its walls are adorned, are two centuries later. On its northern face, a little to the left of the projecting steps, is a seated Buddha figure with a circular hole at the navel, and an *ex-voto* inscription in Kharoshthi, recording that it was the gift of one Buddhamitra, who 'delighted in the law.' The hole at the navel was meant, no doubt, for devotees to place their fore-finger in, when praying against certain bodily ailments; for this is a practice still kept up among the Buddhists of Burma. Among the smaller and richly decorated stupas in this court, a particular interest attaches to the middle one on the south side which contained a tall and narrow relic chamber, and in the latter a reliquary stupa of very remarkable character (Plate V *b*). The reliquary is 3 ft. 8 in. high and is modelled out of hard lime plaster finished with blue and crimson paint and bejewelled round the dome with gems of garnet, carnelian, lapis-lazuli, aquamarine, ruby, agate, amethyst, and crystal, cut in numerous shapes and arranged in a variety of simple patterns. The workmanship of this curious relic casket is undeniably coarse and barbaric, but there is a certain quaint charm in its design as well as in the bright and gaudy colouring of the inlaid gems. Down the body of the stupa runs a hollow shaft, at the bottom of which were the relics themselves hidden within a small copper gilt receptacle. Other small stupas in the inner and outer courts are enriched with reliefs disposed in horizontal tiers along their walls, and two of them bear inscriptions engraved in clear-cut Kharoshthi characters, giving the titles of the images and the names of the donors.

Jaulian.

Of all the statuary found in these courts the most perfectly preserved group is that illustrated in Plate V *c*. It is in a small chapel just outside the entrance to the monastery. In the centre is seated the Buddha in the attitude of meditation (*dhyana-mudra*) with a standing Buddha to his right and left and two attendant figures behind. Of the latter, the one to the left carried the fly-whisk (*chauri*); the other is the Vajrapani, holding the thunderbolt in his left hand. On the central image are still many traces of the red and black paint and of the gold leaf with which it and doubtless the other figures also were once bedecked. A second group of figures in the same chapel is, unfortunately, much damaged, but the realistic basket of fruits and flowers borne by one of the attendants is very remarkable.

In its plan and elevation, the monastery at Jaulian, though slightly smaller, closely resembles the one at Mohra Moradu. There is the same open quadrangle with ranges of cells on its four sides; the same square depression in the middle of the quadrangle;

the same small chamber, perhaps a bath-room, in the corner of the latter ; the same niches for images in front of the cells ; the same kind of windows and lamp-niches inside them ; and the same stairway in one of the cells ascending to the upper storey. But in a few particulars this monastery helps to supplement the information acquired on the other side. Thus, some of the doorways of the cells are still intact, and we observe that they are much lower than might have been expected. Again, on the northern side of the court, the cell immediately to the left of the stairway served as a shrine, and the remains of several burnt clay images adorned with paint and gilding were found inside it. The entrance of this particular cell is relieved by bands of floral designs roughly executed, like the images inside, in burnt clay, but in both cases the burning of the clay seems to have been caused by the general conflagration in which the whole monastery was involved during the fifth century A.D. Other evidences of this fire were also observable in the charred condition of floors and walls and in the masses of charcoal and burnt timbers found in the cells and courtyard. That it took place during the fifth century is to be inferred both from the style of the sculptures, none of which can be referred to a later date than this, and from various minor antiquities found in the cells, among which was a burnt carnelian seal engraved with the words *Sri-Kulesvaradasi* in Brahmi characters of the Gupta age, and a birch bark manuscript also in Brahmi of the same period. The latter, which is the first manuscript of the ki[illegible]e discovered in any excavation in India, is unfortunately sadly damaged by fi[illegible], but it is hoped that its partial decipherment may not prove impossible. Among other antiquities found in the monastery were over 200 coins, many iron implements, copper ornaments, terracottas and numerous potteries, including several large store jars that are still to be seen in some of the cells.

Speaking generally, the monuments in the Jaulian group are more highly ornamented and in a still better state of preservation than those at Mohra Moradu ; for many of them had only just been erected and the rest but newly repaired and redecorated, when they were overtaken by the catastrophe which resulted in their burial. On the other hand, the decoration of these buildings at Jaulian is not of so high a quality as that at Mohra Moradu. There is less breadth in the treatment of the reliefs, less vitality and movement in the figures, less subtlety in their modelling, and less delicacy in their technique. But whether this inferiority is due merely to their being the works of less capable artists, or whether they were executed during a later and more decadent period of art is open to question. That the destruction of the Buddhist settlement at Jaulian took place in the fifth century A.D.—possibly at the hands of invading Huns—there is every reason to believe ; and if this date is correct, then the decorations on the walls of the stupas and the Kharoshthi inscriptions which accompany them can hardly be ascribed to a date earlier than the close of the 4th century A.D.

In the excavation of the several sites at Taxila, I have again to acknowledge, with gratitude, the efficient help rendered by Mr. V. Natesa Aiyer, B.A., Officiating Superintendent, Frontier Circle, and by Mr. M. Ghose, M.A., Archæological Scholar, both of whom have taken a large and responsible share in the field-work.

Kashmir

The semi-classical influence which permeated from Taxila into the neighbouring hills of Kashmir is well illustrated by a fine collection of terracotta heads and other figures belonging to the Kushan and early Gupta epochs which Rai Sahib Daya Ram

Sahni found at Ushkur, near Baramula. Three specimens of these terracottas are illustrated in Plate VI *a, b, c*. The modelling of the first is highly naturalistic and forceful ; the other two are more conventional ; and in the treatment of the lips, chin and cheeks recall to mind many Mathura images of the Kushan period. The terracottas in question were found just outside the courtyard of the famous stupa built by Lalitaditya in the 8th century A.D. and the remains of the latter monument, which was still standing to a considerable height only a few decades ago, have also been excavated by the State Archæologist. On one of the stone blocks of the basement of the stupa is carved, in Sarada characters of the mediæval period, the word *Heshkapu*, manifestly to be completed as *Heshkapura* or *Hushkapura*, the ancient name of the town which, according to the Rajatarangini, was founded by the Kushan king Huvishka or Hushka. Another interesting monument that was also cleared of débris by Mr. Daya Ram Sahni and is now exposed to its full height, is the temple of Siva at Narastan, a typical and well-preserved example of the later mediæval architecture of Kashmir (Plate VI *d*). Here also a number of sculptures, mostly fragmentary, were recovered, and have been deposited in the Srinagar Museum.

Northern Circle. Muttra.

In my last administrative report I mentioned that in the Muttra District some trial excavations had been made and a few wells cleared on behalf of the Archæological Department by Rai Bahadur Pandit Radha Krishna, Hon. Curator of the Muttra Museum, who has himself contributed most liberally to the cost of exploration and in other ways rendered great services to the cause of archæology in this District. Some further specimens of the objects recovered by the Pandit in the course of these diggings are reproduced in Plate VII, *a, c* and *d*. All three belong to the Kushan epoch ; but the earliest probably is the seated image of a Bodhisattva (*c*) with an attendant standing to his right and left, and figures of devotees carved in relief on the face of the lion pedestal. This image bears an inscription engraved in Brahmi characters on the upper and lower rims of the pedestal which informs us that the Bodhisattva was set up by a nun named Pushahathini, together with a nun Budhadeva and her parents, on the 5th day of the third month of the winter in the year 39, during the reign of Huvishka.

The second statue (*a*) is that of a nude male figure, presumably a Yaksha, holding a club in his right hand and a vase in his left. The third (*d*) is a statue of Kubera, the God of Riches, grasping a purse in his left hand and some uncertain object in his right. The staff (?) in his left arm is a quite novel feature in images of this deity.

Gwalior.

A discovery of some interest made in Gwalior State by Mr. M. B. Garde, the Archæological Inspector, was that of a series of Buddhist caves near the village of Khejdia Bhop in the Mandasor District. A general view of these caves is reproduced in Plate VIII *a*. The hill in which they are hewn faces roughly north-west, and is about 20 miles S. E. of Dhamnar, and 10 miles west of Kholvi. "Like the caves at these two places," says Mr. Garde, "the Bhop caves are cut out of a very coarse laterite rock and are devoid of any refined ornamentation. The excavated façade is a horseshoe bay measuring nearly 500 yards in length. About the middle of the line stands a stupa in an open court ; the rest of the excavations consist of cells, of which originally there were not less than thirty, though only twenty of them are now reasonably well preserved. The stupa is composed of two cylindrical drums, one above

the other, and is 9′ 10″ in height. The date of the *vihara* at Bhop appears to be approximately the same as that of the Dhamnar Caves, namely, 7th century A.D." Among other monuments which Mr. Garde has investigated and brought to notice during the past year are the two temples illustrated in Plates VII *b* and VIII *b*. The former of these is the Mahadeva Temple at Jamli. Though relatively small, with a base measurement of only 27′ 3″×18′ 6″, it is a singularly exquisite and perfect example of tenth century architecture in the Aryavarta style. The Chamunda temple at Gaznikheri is about two centuries more modern, and of more elaborate and rococo, but less pleasing design.

Western Circle.

In Sind, some further digging was done by Mr. Bhandarkar in one of the mounds at Mirpur Khas close to the stupa opened by Mr. Cousens in 1910. "During the excavations carried out this season," says Mr. Bhandarkar, "the remains of four different periods were brought to light and the débris that had accumulated in each layer appears to have been the result, not of natural accumulation, but of deliberate filling. The remains of the second period comprised a great array of small votive stupas (Plate IX *a*) and the walls of two monasteries of about the 6th century A.D. The site was filled up on several occasions in order, apparently, to raise the height of the site and guard it against the flooding of the Indus. Among the antiquities recovered here was a torso of a colossal stucco and gilded image of a standing Buddha or Bodhisattva. The image seems to have been modelled over a wooden framework, the different parts of which were held fast by iron nails. Iron nails were also found in many of the stucco fragments, *e.g.*, the fingers. Other interesting finds consisted of inscribed tablets of various shapes and sizes and numerous diminutive clay stupas, some of which bore the Buddhist creed written in a flowing cursive hand."

Rajputana.

In Rajputana, the most notable discovery of the year was a marble temple of the Sun God at Varman in the Sirohi State. This temple, which is one of the oldest Surya temples known to us, is interesting alike from an architectural and from an iconographic point of view. "It faces east," says Dr. Sukthankar, "and consists of a shrine, *sabha-mandapa*, *pradakshina* and porch. The careful finish of the carvings, the proportion of its members, and the restricted use of decorative detail all attest the high level of artistic ability attained by its designers."

Southern Circle.

From certain inscriptions[1] in the famous Krishna temple at Vijayanagar it is known that when, in 1514 A.D., Krishna Deva Raya, the greatest of all the Vijayanagar rulers, captured the Fortress of Udayagiri from Prataparudra, the Gajapati king of Orissa, he took with him from that place an image of Balakrishna and enshrined it in a Krishna temple in his own capital. In September 1916, Mr. Longhurst had the good fortune to discover this historic image hidden among some débris in the sanctum of the Krishna temple at Vijayanagar which has recently been undergoing repairs. It is a stone image of Balakrishna and represents the deity as a chubby boy seated on a pedestal with his right foot resting on a lotus flower. The arms are broken and missing, but probably the right hand held a butter-ball in the manner peculiar to this particular representation of Krishna ; while the left arm and hand rested on the left thigh. The figure, including the pedestal, is 3 ft. 2 in. in height, and is carved in the round out of

[1] See "The Second Vijayanagar Dynasty" by Mr. Krishna Sastri, Annual Report of the Director-General of Archæology for 1908-09, Part II.

a block of greenish black granite, similar to that found at Udayagiri in the Nellore district, whence the image originally came. At Udayagiri also, Mr. Longhurst discovered an old ruined Krishna temple which appears to be the original building from which Krishna Raya removed the image in question. "The shrine of this temple," says Mr. Longhurst, "is generally similar in its arrangement and dimensions to that of the Vijayanagar temple, the main difference being that the latter is provided with a circumambulatory passage around the shrine chamber." Photographs of both these temples are reproduced in Plate III, *a* and *b*, and further particulars regarding them may be found in Mr. Longhurst's Provincial Report.[1] In the same report, also, is given an interesting account of the Buddhist monuments at Guntupalle in the Kistna District, many of which were excavated as far back as 1889 by Mr. Rea.

Eastern Circle. Nalanda.

Dr. Spooner's work at Nalanda has yielded interesting results in several directions besides a fairly extensive collection of antiquities, mainly statuettes and seals. It has been found that the most southerly monastery of the whole complex had been repeatedly built over through successive ages, and that at least four distinct monasteries have stood, at different periods, upon this spot. "Of these," says Dr. Spooner, "the lowermost and oldest must have been an important building, because it appears that practically the entire verandah on the courtyard side was lined with large sculptures and other ornaments of considerable beauty and excellence. The majority of these were evidently removed before the final collapse of the superstructure, but sufficient fragments have been recovered to attest the high quality of the art. When this oldest building fell finally to decay, it was then not only built over, but actually encased, by a second monastery. The process necessitated the erection of an exceptionally lofty plinth, which in turn led to the building of the stair-case on the west which was described in the report of the first season's work. That this second monastery must have been singularly imposing, when viewed from outside, is palpable, but internally it can have been no less interesting, because in this area the old level of the original courtyard was still maintained. In this courtyard was erected a curious brick structure containing two chambers and provided with vaulted roofs perhaps in imitation of the rock-cut caves for which Bihar is famous. The finds at Site No. 1 include multiple examples of the official seal of the Nalanda establishment, which for some as yet unknown reason shows the same insignia as that of the establishment at Sarnath. Many other sealings also occur, including one particularly fine official seal of Gupta date, and various fragmentary terracotta plaques which preserve portions of royal genealogies. The lowermost verandah yielded certain sculptural fragments of considerable interest, and a heavy bronze or copper pillar, some four feet high, surmounted by an elaborate capital showing the well-known, and in this case, well executed device of a lion rampant upon an elephant. The smaller statuettes in both stone and metal are too numerous to detail. Several of them are of distinct excellence, and marvellously preserved.

"At the Vihara west of Site No. 1, to be referred to henceforth as Site No. 3, ground was broken for the first time, with very interesting results. Here again repeated occupation is demonstrable; but in this case the successive structures have not been erected one above another, but rather as outer integuments, completely enveloping the

[1] *Annual Report of the Archæological Department, Southern Circle*, Madras, 1916-17, pp. 22-30.

older monument. At least three such successive envelopes are traceable, and it is to be remarked that of these the oldest and now innermost one still preserves its ancient stucco facing with abundant figural ornament. So far, only a small segment of the whole has been uncovered, and it is too early to tell positively what the actual nature of the so-called Vihara was. The sculptural and minor finds here have been few, but one colossal black-stone Bodhisattva has been found *in situ*, in a now ruined, detached shrine, standing free at the north-east corner of the site. Possibly others of like nature may be met with later, but there seems to be no actual pendent to this statue on the north-west."

Ancient Observatories.

A most useful piece of work accomplished during the past year has been the thorough investigation of the well-known Observatories of Jai Singh at Delhi, Jaipur, Ujjain and Benares, and the preparation of a detailed and well-illustrated report on them. This task has been carried out on behalf of the Archæological Department by the well-known authority on Indian Mathematics and Astronomy, Mr. G. R. Kaye, Curator of the Bureau of Education, whose services were kindly lent for the purpose by the Educational Commissioner. Mr. Kaye's report is to be published in quarto form as Volume XL of the *New Imperial Series*. It is intended to be mainly archæological and descriptive and will accordingly contain a full account of the observatories erected by Jai Singh, of the instruments which he devised and of the work which he accomplished; but it will also contain a sketch of Hindu astronomy in so far as it is connected with Jai Singh's labours, and several Appendices, which will be found particularly useful to students of the history of Eastern astronomy.

Museums and minor antiquities.

In accordance with the instructions contained in Section 12 of the bye-laws of the Indian Museum, a separate report on the working of the Archæological Section of the Museum is published in Appendix E. In Madras, good progress was made in the compilation of the much needed catalogue of copper-plate inscriptions; at Lahore, the photographic collection of Buddhist sculptures was thoroughly overhauled and supplemented by many new prints; and at Lucknow, the relabelling of the more important exhibits with trilingual descriptions was pushed forward, a catalogue of the Mughal coins was completed, and one for the Gupta and Pathan coins was also begun. In the same museum, also, a series of lectures on Buddhism, Jainism and Brahminism was arranged with special reference to the art connected with each religion.

Fresh acquisitions.

Particulars of the acquisitions made for the Indian Museum, Calcutta, are given in Appendix E. Of the acquisitions made for other museums the following are the most important:—For the Madras Museum, an inscribed memorial stone from the Salem District commemorating the greatness of Vidderasi, a Pasupata or Saivite teacher; several stone and copper images of Hindu gods and goddesses from Cuddapah, Bellary, Salem, Bezwada and Tanjore; and three sets of copper plate inscriptions from the Masulipatam and Guntur districts, recording grants by Chalukya Bhima I, who ruled from 888 to 918 A.D., by the Eastern Chalukya king Vishnuvardhana V, who ascended the throne in 843 A.D. and Vishnuvardhana III, who reigned from 709 to 746 A.D. For the Prince of Wales' Museum, Bombay, a representative collection of Indo-Greek and Gupta coins, and twelve copper plate inscriptions and a copper seal donated by the Palitana Darbar of Kathiawar. For Muttra, 61 new sculptures of varying date collected by the Honorary Curator, Rai Bahadur Pandit Radha Krishna. For the Taj Museum,

Agra, an interesting set of three large coloured Indian drawings of the Agra Fort and the Taj. And for the Lucknow Museum, a fine image of Vishnu of late mediæval style from Sultanpur, an inscribed image of Rishabhanatha from Sitapur, an image of Surya presented by His Highness the Maharaja of Balrampur, and a collection of terracotta sealings, toys, and ornamental bricks excavated at Sankisa and presented by the United Provinces Historical Society.

For the Delhi Museum of Archæology, a special grant of Rs. 8,000 was sanctioned by the Government of India for the purchase of a number of exhibits from Mr. Imre Schwaiger's well known collection of antiquities, among the acquisitions being several fine manuscripts; portraits of Aurangzeb, Shahjahan, Nadir Shah, Bahadur Shah I, Alamgir II, Mirza Jahan, the eldest son of Akbar Shah II, and Muhammad Shah; brass images of the Buddha and of Buddhist gods and goddesses from Tibet; lamp stands from Nepal; a group of 24 Jaina Saints dated 1457(?); a suit of ancient armour of Saracenic pattern; a Tibetan saddle; a carved Jaina shrine of wood; and a crystal votive stupa. Besides the above, the museum also purchased an interesting collection of 26 pictures relating to the Mutiny of 1857, a manuscript copy of the Quran in Naskh characters written in 1669-70 A.D., and a Farman of the Emperor Jahangir, dated 1622-23 A.D., and it received as gifts several documents of historical importance presented by the Chief Commissioner, 3 swords and a dagger presented by Sir Roland Wilson, Bart., and 23 portraits, chiefly of the Pathan and Mughal kings and queens, presented by Mr. W. E. Jardine, C.I.E., Resident in Baroda.

Treasure Trove.

In the matter of coins the number of Treasure Trove finds during the year amounted to nearly fifty and comprised more than 3,500 specimens. The largest number, amounting to 2,285, came from the United Provinces; 650 from Bombay and 324 from Bihar and Orissa. The majority of these coins, however, were Mughal and very few were of value from a numismatic point of view. The chief find of interest was one made in the Madura District of the Madras Presidency, which consisted of 11 gold Roman coins belonging to the Emperors Claudius, Nero and Domitian (41 to 96 A.D.).

The hoard of 16,000 gold coins found at Kodur in the Madras Presidency last year was examined and the majority of them proved to be of the Telugu-Chola kings, who reigned in the 13th century in the present Nellore and Cuddapah districts. Another find made in 1913 in Purneah in the Province of Bihar and Orissa was also examined this year. It comprised 2,873 silver punch-marked coins of both square and round types. Of the finds other than coins the following deserve notice: a mediæval stone image of Vishnu from Faridpur, Bengal; six copper axe-heads and 19 bars from Palamau, Bihar and Orissa; and five copper celts from Shajahanpur, United Provinces.

Epigraphy.

The following account of the Epigraphical work accomplished during 1916-17 is furnished by Rao Sahib H. Krishna Sastri, Officiating Government Epigraphist:—

"Parts I—III of Volume XIII of the *Epigraphia Indica* have appeared under the editorship of Dr. Sten Konow. An important scientific contribution is 'The Cycle of Jupiter, and the Names of the Samvatsaras applied to Hindu Solar Years' by Mr. Sewell. It is a continuation of his *Indian Chronography* and is highly instructive. The Susunia rock inscription of Maharaja Chandravarman already referred to in the Epigraphical Review for 1915-16 is published with an excellent facsimile plate by Mahamahopadhayaya Pandit Haraprasad Sastri. The two Talesvara copper plate grants

of Dyutivarman and his son Vishnuvarman now preserved in the Lucknow Museum have been published for the first time by Mr. Y. R. Gupte. They bear seals with legends in Gupta characters of about the 5th century A.D. whereas the inscriptions themselves are written in characters of about the 7th century. Mr. Gupte after a long and critical analysis of the alphabet has come to the decision that the plates must be forgeries made between the sixth and the eighth centuries of the Christian era. His arguments might be accepted as perfectly sound, provided the plates pretended to be of a period different from that to which they actually belong. But this they do not do. On the contrary, they state in no indefinite terms that, in one case, the previous grants relating to the gift were burnt by fire, and that the charter under review recorded the sanction granted for writing on *vrishatapa*, of 'the dimensions and the names of the lands that were being enjoyed (by the donee)' and that, in the other case, a general sanction was given to issue copper plates to certain holders of property for establishing their long-standing rights. Neither the names Agnivarman, Dyutivarman and Vishnuvarman which occur in the body of the inscription, nor the names Vishnuvarman, Vrishavarman, Agnivarman and Dvijavarman, which occur on the seal, have been identified, and, in the absence of any such identification it is difficult to understand how the charters could be pronounced to be forgeries. The seals, however, may have been copies of some older seal as explained by Mr. Gupte. One fact, however, has to be noted in this connexion, *viz.*, that the destruction of the original documents by fire and their consequent renewal in later characters, cannot in any way vitiate the genuineness of the grants themselves. This is also established by the first and last verses of the Nidhanpur copper plates of Bhaskaravarman (*Ep. Ind.*, Vol. XII, No. 13) published by Professor Padmanatha Bhattacharya and the note by Dr. Sten Konow at the end of the introduction to that paper. The Sendalai Pillar inscriptions published by Mr. K. V. Subrahmanya Aiyar and tentatively referred by him to the first half of the 8th century A.D., record, in highly classical Tamil verse, the victories gained by three successive princes of the Muttaraiyan or Maran family whose dominion included Tanjai (*i.e.*, Tanjore), Trichinopoly and Pudukkotai. From one of these it appears that the Muttaraiyan chiefs were vassals of the Pallavas. Evidently as members of some collateral branch of the Pandyas, these must have acknowledged the supremacy of the Pallavas and been allowed by the latter to rule over the bordering districts of the Pallava Empire in the south. Their contest with the Pandyas indicates the existence of Pandya power in the farthest south even during the expansion of the Pallava Empire. Dr. L. D. Barnett contributes a large number of papers to the parts of the *Epigraphia Indica* under review. His Nidagundi inscription relates to the Kadamba prince Tailapa II, a vassal of the Chalukya king Vikramaditya VI of Kalyani. The Ittagi inscription (A) of A.D. 1112 gives a lengthy genealogy of the Chalukya dynasty beginning from the Sun and the Moon and records the building of the large temple of Mahadeva (120 feet in length and 60 feet in breadth) at that village, in or about A.D. 1112,—a temple which Fergusson says 'must be regarded as one of the most highly finished and architecturally perfect of the Chalukyan shrines that have come down to us.' Regarding the same temple Meadows Taylor held the opinion that 'the carving of some of the pillars and of the lintels and architraves of the door, is quite beyond description. No chased work in silver or gold could be finer.' The two inscriptions from Belgaum

now preserved in the British Museum, London, belong to the beginning of the 13th century, and are of the time of the Ratta Mahamandalesvara Kartavirya IV. The importance of the first of these consists in the grant of imposts both in kind and in coin on various commodities of trade and certain shops. The author accordingly remarks that 'it throws considerable light on the economic organisation of a great town of the period' and that 'the mercantile community of Belgaum (now a centre of great trade) had already at the beginning of the 13th century included foreign settlers from Lala, *i.e.*, Lata (Gujarat) and the Malayalam country.' The citation of the astronomical details in the dated portion of this record is also of interest, inasmuch as it satisfies the rule that a *tithi* used with a *samkranti* should be the *tithi* which is actually current at the moment of that *samkranti*. The Sarabhavaram plates of the Lord of Chikura of about the 8th century A.D. were discovered at a spot where, as the author Mr. T. A. Gopinatha Rao says, are found remains of several brick stupas of a fair size and about 6 or 7 miles from it towards the Godavari are more stupas on a hill overlooking a lake. These deserve to be examined and, if necessary, excavated by the Archæological Superintendent of Madras. A valuable note added to the paper by Dr. Sten Konow suggests that Sarabhavaram of the Godavari District where these plates were found may be identical with the well known Sarabhapura mentioned in the copper plate grants of Maha-Jayadeva and Maha-Sudeva, whose alphabet is almost similar to that of the Sarabhavaram plates. Sarabhapura, it may be observed, has hitherto been looked for somewhere in the Raipur, Wardha and Sambalpur districts of the Central Provinces.

"The only epigraph worth mentioning that was acquired for the Provincial Museum, Lucknow, during the year under review, is a copper plate from the Mainpuri District. It records the grant of some land in a very corrupt language and script and bears no date.

"The Superintendent of the Rajputana Museum, Ajmer, Mr. Gaurishankar H. Ojha, has acquired seven new lithic records for that institution and has examined them all critically. Two of these are of exceptional interest, *viz.*, one from Kot in the Bharatpur State and another from Panahera in the Banswara State. The former is a memorial tablet raised to the Brahman Lohaditya or his son, who lost his life fighting single-handed with a number of robbers, in an attempt to rescue some cows. From palæographical indications Mr. Ojha takes the 48th year quoted in the record to refer to the Harsha era and accordingly fixes its date at A.D. 655. This approximation of Mr. Ojha appears to be confirmed by the name Maha-Chaitra of the twelve-year Barhaspatya (Jupiter) Cycle given for the first time in a Rajputana inscription. In his volume of *Gupta Inscriptions*, Introduction, p. 115, Dr. Fleet mentions a Maha-Chaitra *samvatsara* which commenced on Thursday, the 18th November, A.D. 510. It is not unlikely, therefore, that 144 years (or twelve full cycles) subsequent to it (*i.e.*, in A.D. 654) there was again a Maha-Chaitra year of the Barhaspatya Cycle. The record from Panahera is of the time of the Paramara king Jayasimha of Malwa and is dated in the Samvat year 1116 (A.D. 1059). The second part of this epigraph, which is the more interesting, gives an account of the Paramaras of Vagod who belonged to a junior branch of the dynasty. Dhanika's son Chachcha is stated to have given battle to the Rashtrakuta king Khottikadeva (A.D. 972 and 973) on behalf of Siyaka the great grand-father of Jayasimha, at a place called Khalighatta on the bank of the Reva (Narbada), and to

have died in the campaign. His grandson was Satyaraja, a feudatory of Bhoja, who fought with the Gurjaras and married the Chahamana princess Rajasri. His son was Limbaraja and the latter's younger brother was Mandalika, who, as a feudatory of Jayasimha, captured in battle the Commander Kanha with his horses and elephants. This collateral branch of the Paramaras is not known from other published inscriptions of the dynasty. The Arthuna fragmentary stone record noted at p. 80 of *Indian Antiquary*, Volume XXII, mentions a certain Kankadeva, also of a collateral branch of the Paramaras, as having defeated, near Narmada, ' the forces of the ruler of Karnata and thus destroyed the enemy of the Malawa king Sriharsha ' and to have lost his own life on the occasion. The reference is evidently to the very same battle of Khalighatta in which Chachcha died. It becomes therefore clear that in this battle Siyaka Harsha II must have been helped by many of his kinsmen of whom Chachcha and Kankadeva (*i.e.* Kanha ?) were two. This is the only inscription which supplies us with the name of the place where the battle between the Rashtrakuta Khottika and the Paramara Siyaka, took place. Besides, the date supplied by the record, *viz.*, A.D. 1059 carries us four years beyond A.D. 1055, which is the only date known so far for the Paramara king Jayasimha. The five other inscriptions collected by the Ajmer Museum are of comparatively minor importance, excepting perhaps the Chinch record of A.D. 1520, of Jagamala entitled Maha Rawal. This date, which is seven years before the death of Rawal Udayasimha, the father of Jagamala, in which the father appears with the title of a ruling chief, enables Mr. Ojha to conclude that the country of Vagod must have been already divided during the lifetime of Rawal Udayasimha, between his two sons Prithviraja and Jagamala. This view, however, is opposed to tradition, though the two brothers might have subsequently quarrelled after the death of their father and again divided the State between themselves as before.

" The Archæological Department, Gwalior State, copied one hundred and fifteen inscriptions of which only a single record had already been published in the *Epigraphia Indica*, Volume II. Of the rest one is written in Gupta characters, 108 in Nagari and 5 in Arabic or Persian. The Gupta record which is of about the 5th century A.D. comes from Hasalpur in the Sheopur District and refers to a subordinate ruler, the Maharaja Nagavarman, who is not known from any other source. A sculpture called Chaturmurti-Rudra-puja-dhyana is said to have been installed by a certain Mahipala, the son of an officer in charge of the camel force (*ushtradhikari*) in Vikrama-samvat 1238. What this sculpture represents, is not quite clear, but Mr. Garde believes the pillar on which it is engraved to be the memorial of a warrior killed in battle. The collection which Mr. Garde has made includes some tombstones and *Sati*-stones of the 13th century A.D. Two records at Ghusai (Ghoshavati of inscriptions) one of which is on a tombstone, supply the names of a line of Jaina teachers. A memorial tablet at Gadhla (district Sheopur) relates to the reign of the Maharajadhiraja Hammiradeva, the last of the Chahamana kings of Sakambhari and the hero of the Hammira-mahakavya, who ruled at Rantambhor and was slain by Ala-ud-Din in A.D. 1301. Two records of the Tomara kings of Gwalior of the 15th century A.D. have also been copied. One of them refers to the reign of Kiratasimha and the other mentions Maharajadhiraja Manasimha, the most prosperous and the most popular of the Gwalior Tomara kings.

"Only two stone inscriptions have been noted by the Superintendent, Eastern Circle, as having been discovered during the year under review. One of these comes from Murumura in the Dhamtari Tahsil, Raipur District, and supplies the name Aditya-varaha. The second, which was dug up at Damoh, another village in the Central Provinces, bears a Hindu inscription of Mahmud Shah II of Malwa and is dated in Vikrama-Samvat 1570 (A.D. 1512). It proclaims the remission of certain fees theretofore levied by the Mukta grantee of the town of Damoh. This inscription, which is of much interest, will be published in the *Epigraphia Indica* by Rai Bahadur Hira Lal. The deficiency, however, in the discovery of lithic and copper records in this Circle. is more than made up by a large find of inscribed terracotta plaques and clay seals in the excavations at Nalanda. Twenty of these are of one type and bear the legend *Sri-Nalanda-Mahavihariy-Arya-Bhikshu-Sanghasya*, 'of the venerable community of monks in the great Vihara of Sri-Nalanda.' They represent the device of the Wheel of the Law flanked by two gazelles which, in the opinion of the Superintendent, would have been more appropriate if they had been found at Sarnath, the site of the famous Deer-Park where Gautama first turned the Wheel of the Law. This device, it may be noted, occurs also on the seals of the Pala kings of Bengal and the Rampal plate of Srichandradeva (*Ep. Ind.*, Vol. XII, Plate opp. p. 138). Still another represents a very fine example of an official seal of the Gupta period with the device of Lakshmi and the celestial elephants. The writing and the device which are beautifully sharp and clear, are referred to the 5th or 6th century A.D. The former has been read *Nagara-bhuktau Kumaramaty-adhikaranasya* '(seal) of the office of the Crown Prince's minister at Nagarabhukti,' which is believed to be an ancient name for the Province of Patna.

"Rai Sahib Daya Ram Sahni reporting on the Hindu and Buddhist Monuments, Northern Circle, says that the year under review was fruitful in epigraphical records, inasmuch as forty-two new inscriptions were copied. The bulk of them are preserved in the Archæological Museum at Mathura. Two of these short epigraphs are written in Kharoshthi characters, but a large number are in Brahmi of the Kushan and Gupta periods. All of them are Buddhistic, excepting one which is carved on the detached pedestal of a Jaina sculpture and bears the inscription 'the Chaitya of the Arahats.' One other slab found in a well refers to a Bodhisattva image in a monastery named Srivihara which does not appear to be known from any other source yet. Inscriptions of the collection copied from the Kosam pillar are dated from the 16th century A.D. and mostly record the names of visitors to the site.

"Very important work has been done in the field of Epigraphy in Burma. Besides the discovery of fifteen new inscriptions copied during the year, one in Talaing and fourteen in Burmese, all of which range in date between the fourteen and the sixteenth centuries of the Christian era, the preliminary translation of 264 inscriptions from among the several thousands of texts printed in modern Burmese characters in six large volumes of inscriptions (already published) has been completed. Also a valuable columnar list of all the records contained in these six volumes has been drawn up giving in each case the place of origin, the founder's name and a brief indication of contents. M. Duroiselle remarks that in future the list 'will be kept up to date by complementary lists whenever sufficient material has been collected.' Another valuable

piece of work undertaken during the year is an index of all names of persons, places, religious foundations, etc., mentioned in the volumes referred to above. It is unnecessary to add that when completed this index will be of great service in the hands of workers in Burmese History, both political and geographical, as yet so little explored. The issue of the new Antiquarian Journal *Epigraphia Birmanica*, twice a year, under the authority of the Burma Government, will tend greatly to popularise the study of Burmese Epigraphy among scholars and will serve to stimulate helpful criticism. Enough material for three or four successive issues of the journal has been already collected, *viz.*, the quadri-lingual Myazedi pillar inscription, the 400 glazed plaques with legends of the Ananda temple at Pagan which illustrate the last ten great Jatakas and some Burmese and Mon inscriptions.

"Three copper plate records and one stone inscription were examined by Mr. D. R. Bhandarkar in the Western Circle. The former includes a grant of the Western Chalukya king Vinayaditya (Satyasraya) of his ninth year corresponding to Saka 609. It records the grant of the village Vira in Palayatthana-vishaya on the north bank of the river Nira, from his royal camp at Bhadali. Mr. Bhandarkar identifies Palayatthana with the modern Phaltan, Bhadali with Badlee-Budruk and Vira with Veer. Other places mentioned in the description of the boundary line are also identified with villages surrounding Veer, and thus it is concluded that the mention in so early a record of the 7th century A.D. of the river Nira and other place names which still exist under the same or similar designations in the Poona District, proves that the latter could not be of recent origin, but must have been known long long before the advent of the Muhammadans. The two other copper plates discovered at Daulatabad (Devagiri) and sent for examination by Mr. Yazdani, Superintendent of Archæology, Hyderabad, included one already edited by Mr. Bhandarkar in the *Epigraphia Indica*, Volume IX, pp. 193ff, and another of the Western Chalukya king Jayasimha II Jagadekamalla, dated on Monday the full-moon day and day of lunar eclipse in the month of Jyeshtha of the Pingala-Samvatsara current after Saka 936. Saka 936 corresponds not to the Cyclic year Pingala but to Ananda which came three years before. And it is not likely that the northern Cycle, according to which Saka 936 expired was the current Pingala, could have been meant. In Saka 939 Pingala, in the month of Jyaishtha, there was an eclipse of the moon, *i.e.*, on May 13, A.D. 1017. If this was the date actually specified by the plates it would be the earliest yet found for Jayasimha II, for whom Dr. Fleet gives the dates A.D. 1018 and 1042. The stone record discovered at Chimalgi in the Bijapur district is one of the Western Chalukya king Tribhuvanamalla Vikramaditya VI, and is dated in the 8th of the Chalukya-Vikrama years, on Sunday the 13th *tithi* of the bright half of Pushya of the Cyclic year Rudhirodgarin, the day of the Summer Solstice (A.D. 1083, December 24). The grant consisted of an assignment by the king of the tolls on one bundle of betel leaves per month, from the *Pannaya* and *Hejjunka* taxes, to the temple of Sakalesvaradeva at Sirimalgi (the modern Chimalgi). Of the three inscribed stones secured last year from the Residency Office, Bhuj, Cutch, for the Prince of Wales' Museum at Bombay, one is in Hebrew of the 13th century A.D. and two in Himyaritic characters. All three appear to have been brought originally from Aden.

"In the Southern Circle were transcribed and examined 24 copper plate records and 668 stone inscriptions. Some early epigraphs from the Anantapur district reveal for the first time the names of a few Nolamba-Pallava kings and are of much interest as hero-stones and commemorative monuments. A curious tablet of this latter class is an epitaph raised by the king on a favourite dog of his which was killed by a boar during a hunt. Later inscriptions from the Madakasira taluk of the same district contain clear evidence of the South Indian affinities of the ruling princes of this part of the country who claim descent from the Cholas. These same epigraphs also point to the vast influence of the Jainas and their creed, a queen of one of the ruling princes being herself a lay disciple of the Kanur-gana and Kondakund-anvaya.

"Of the numerous Pandya and Chola-Pandya inscriptions copied in the Pandya country, the latter include those of the Chola princes who served as Viceroys in the Pandyan territory which was evidently amalgamated into the Chola empire during the time of Rajaraja I. Four such princes are known; these were: (1) Jatavarman Sundara Chola-Pandya, son of Rajendra-Chola I, (2) Maravarman Vikrama Chola-Pandya, perhaps identical with the prince mentioned in inscriptions of Rajendradeva, (3) Sundara Chola-Pandya, in whose records the Chola Emperor (Rajadhiraja ?) is referred to as *amman* (maternal uncle) and (4) Gangaikonda-Solan, entitled Jatavarman-chola-Pandyadeva, the son of Virarajendra I. The Pandya records copied during the year carry the chronology of that dynasty further back by a few decades from the time of Jatavarman Kulasekhara I, the earliest mediæval Pandya king hitherto known. The records are also interesting in another way, as pointing to a system of organised Revenue Administration in the Pandya country at that early period.

"The Eastern Chalukya copper plates examined during the year in the Southern Circle cover the whole period of that dynasty from the founder Kubja-Vishnuvardhana I of the 6th century down to Vishnuvardhana Mallapa, the latest potentate who crowned himself at Pithapuram in Saka 1124 (A.D. 1202). The Velanandu chiefs, who grew powerful under the Chola-Chalukya Viceroys from and after the time of Kulottunga I, are also represented by an important copper plate inscription of Rajaraja II, the son of Kulottunga-Chola II.

"The most interesting record examined, however, is one of the time of the Kakatiya queen Rudramadevi. It supplies a succession list of the teachers of the Saiva pontificate of Golaki-matha which lay in the Dahala (Chedi) country. A teacher of this *matha* was Visvesvara-Sivadesika who was the spiritual preceptor of the Kakatiya king Ganapati and a resident of Purvagrama in the southern Radha province of Gauda (Bengal). He was a great exponent of the Pasupata-Kalamukha creed and founded in his own name at Malkapuram in the Guntur taluka, a Siva temple and a *matha*, a maternity hospital (Sutikalaya), a Vedic College and a feeding house. The Pasupatas were a class of Catholic Saivas who extended religious emancipation to all people who joined their fold without any distinction of caste. Accordingly, in the feeding house founded by Visvesvara it was stipulated that poor people of all castes from the Brahman down to the Chandala were to be fed at all times of the day.

"Among a large number of miscellaneous records examined may be mentioned a copper-plate grant of about the 8th century A.D. which belongs to a certain Prithvi-Maharaja, son of Vikramendra and grandson of Maharaja Ranadurjaya. The kings

were of the Kasyapa-gotra and issued the grant from Pishtapura (Pithapuram). These names are new and have not been traced in other records. The communal disputes between Vellalas and Vellai-Nadars and the separation into five sub-divisions of the artizan classes are also registered in two records of about the 16th century A.D. and may be of interest in tracing the development of the history of these communities."

Muslim Inscriptions.

The following account of Muhammadan epigraphy is supplied by Mr. Ghulam Yazdani, Government Epigraphist for Muslim inscriptions :—

" Owing to difficulties in the preparation of facsimile plates there was some delay in the publication of the *Epigraphia Indo-Moslemica*. The latest number of the Journal includes an article by Mr. Zafar Hasan on the Adchini inscription of Delhi, which refers to a hand-impression of the Prophet Muhammad procured by Muhammad Ma'sum, entitled I'tibar Khan, in the reign of Farrukh Siyar. The superstitious regard for hand and foot prints of saints, divines and legendary personages is common in almost every religion ; and as tradition attributed to the Prophet Abraham the miracle of the stone becoming soft at his touch, so the Muslims, who believed that Muhammad was vested with the attributes and powers of all the previous prophets, never hesitated to believe that such a miracle was performed by him as well. In India hand and foot impressions of the Prophet are not rare, but Professor von Berchem observes that they are far more numerous in other Islamic countries.

" Shams-ul-Ulama Dr. Jamshedji Jivanji Modi, C.I.E., has contributed an interesting paper on the copper-plate inscription of Khandesh, Bombay, which throws light on the system of colonization as practised in Mughal times.

" In another paper by Mr. Zafar Hasan he discusses the application of the name Khass Mahall, used in an inscription belonging to a building of the same name at Delhi. Mr. Zafar Hasan agrees with the view of Sayyid Ahmad Khan and thinks that the title in line 2 of the inscription signifies the name of the building, and in the last line the title of its foundress, the daughter of Zain Khan."

In the fourth article the Government Epigraphist has dealt with twenty inscriptions of the successors of Sultan Iltutmish. As most of these inscriptions have been published before, an attempt is made to verify the readings and translations of previous scholars, and also to trace the development of the Naskh and Tughra characters in India and to study their special features, a matter which has not so far been systematically investigated. The royal titles occurring in the inscriptions and the phraseology of the epigraphs have been carefully discussed, and in some cases compared with those of other Islamic countries. Some light has been thrown on the identity of historical personages, and in discussing the Gangarampur inscription it has been shown that after the death of Qamru-d-din Timur Khan, the next Governor of Bengal was Malik Mas'ud Jani, and not Malik Ikhtiyaru-d-din Yuzbak, as thought by previous investigators. In the last article the Government Epigraphist deals with the inscriptions in the Golconda Fort. One of them, on the Musa Burj, is of great historic importance as giving an account of the first siege of Golconda by the Mughal forces under Prince Muhammad (son of Aurangzeb), from the Qutb Shahi point of view. The inscription states that the death of the Mughal general, Mir-i-Miran, from a shot wound hastened the termination of the siege. The outstanding feature of the Golconda inscriptions is their fine calligraphy, which at that time was practised in India as an art for decorative purposes. The

majority of the inscriptions were written by Persian artists, and, like the monuments of the Deccan, they confirm the fact that Persian influence was more prominent in the Deccan than in Northern India.

Tours.

The tours of the Archæological Superintendents are chronicled in their respective annual reports, and need not be detailed here. My own movements embraced visits to Kashmir, Taxila, Lahore, Delhi, Agra, Jhansi, Sankisa, Sanchi, Bombay, Ceylon, Bhopal, Sehore, Calcutta and Sarnath. I was encamped at Sanchi for nearly three weeks and at Taxila for ten weeks in order to conduct the works of conservation and exploration which were in progress at those places.

My visit to Ceylon was undertaken for the purpose of conveying to the Buddhists of the island one of the relics discovered at Taxila. The presentation ceremony took place on February 3rd in the old Audience Hall of the Kandyan chiefs at Kandy, which stands close by the Temple of the Tooth Relic (Dalada Maligawa), and was attended by Buddhists from all parts of the island. The scene was a memorable one. Inside the pillared hall, hung with garlands for the occasion, were lines of Buddhist monks in their saffron robes, the Kandyan chiefs in their quaint peaked hats and in all the splendour of their glittering dress, and, at the end of the hall, the Government officials in their more sober uniforms ; while outside were thousands of devout Buddhists who had been waiting from an early hour to do homage to the sacred relic. After the proceedings had been opened by the Hon'ble Mr. C. S. Vaughan, the Government Agent at Kandy, I had the privilege of delivering to the assembled Buddhists the gracious message of His Excellency the Viceroy and of describing to them the recently excavated monuments at Taxila and the circumstances in which the relic had been found. At the conclusion of my remarks, an address of welcome and of thanks to His Excellency the Viceroy for his memorable gift was chanted in Singhalese and a copy of the address engraved on leaves of silver in imitation of palm leaf manuscript was handed to me. The relic casket was then presented by me to the Nugawala Dewa Nilame, as the acknowledged head of the Buddhists in Ceylon, and placed by him in a *dagoba* of crystal and gold—the same in which the famous tooth relic is once a year exhibited to the public. Finally, came the procession of *pera-hera*, as it is called in Ceylon, which in many respects was strangely reminiscent of the processions depicted on the ancient reliefs of Sanchi. First, a band of stilt-walkers bearing many-coloured flags ; then a company of musicians followed by bands of dancers in a variety of costumes, banner-bearers and musicians ; next, a richly caparisoned elephant carrying the relic casket on its back, and following it the Kandyan chiefs, trustees of the temple and priests. Then more elephants, banner-bearers and musicians. And, as the procession moved forward, lengths of white cloth were unrolled along the road for the elephant to walk over and flowers were showered upon it by the crowds, to the cry of " ji ! ji." When the procession was over, the relic was taken into the temple and enshrined in a golden *dagoba* side by side with the Tooth Relic.

Publications.

The following publications were issued during the year :—

1. Annual Report of the Director-General of Archæology, Part I, for the year 1914-15 ; Part II, for the year 1913-14.
2. Annual Reports of the Southern, Western, Eastern, Northern, Frontier and Burma Circles as well as the Epigraphical Report of the Assistant

Archæological Superintendent, Southern Circle, for the year 1915-16.

3. Report on the Archæological Section, Indian Museum, 1915-16.
4. Epigraphia Indica, Parts I to III of Volume XIII.
5. Supplement III to the classified catalogue of the Library of the Director-General.
6. Two additional catalogues of the Library of the Director-General, *viz.*, Alphabetical catalogue of authors and an alphabetical catalogue of subjects.
7. List of photographic negatives stored in the Office of the Superintendent, Western Circle.
8. List of drawings stored in the Office of the Superintendent, Western Circle.
9. Standard List of Ancient Monuments in the Madras Presidency revised up to December, 1916.
10. Hand book to Hampi Ruins.
11. South Indian Inscriptions, Vol. II, Part V.

Library. 783 new volumes including periodicals were added to the Central Library, Simla, of which 114 were obtained in exchange for our own publications, 128 were received as presents and 541 were purchased.

Photographs. A list of the photographic negatives prepared during the year is published in Appendix D to this report.

Personnel. The Director-General was on privilege leave from 5th June to 4th July during which period Dr. D. B. Spooner, Superintendent, Eastern Circle, officiated for him. Mr. H. Panday, Excavation Assistant to the Director-General, held charge of the Eastern Circle during Dr. Spooner's absence. The post of the Assistant Superintendent in the Eastern Circle remained vacant until the 21st December, 1916, when it was filled by the appointment of Mr. H. Panday to that post. Mr. H. Hargreaves, Superintendent, Hindu and Buddhist Monuments, Northern Circle, was deputed to military duty on the 7th December, 1916, and Rai Sahib Daya Ram Sahni, Superintendent of Archæology, Kashmir State, was appointed to hold his office temporarily. Pandit Hirananda Sastri, Curator, Lucknow Museum, was transferred to Pandit Daya Ram's place in Kashmir, and Pandit Kasinath Narain Dikshit, Curator of the Prince of Wales' Museum, Bombay, was put in charge of the Lucknow Museum. Pandit Dikshit's post in Bombay remained vacant throughout the year. The head-quarters of the Assistant Superintendent for Epigraphy, Southern Circle, were transferred from Ootacamund to Madras with a view to bring this officer into closer contact with the University. A Personal Assistant to the Director-General was sanctioned during the year and Mr. G. K. Nariman was appointed to this post on the 7th September 1916.

Scholarships. The Government Archæological Scholarships were held by Messrs. M. Ghose, M.A., Lachhmidhar, M.A., and Muhammad Hamid, B.A. Pandit Lachhmidhar resigned his scholarship on the 30th September, 1916. M. Muhammad Hamid was appointed Excavation Assistant to the Director-General on the 21st December, 1916. In Burma the Government scholarship was held by Maung Hla, B.A.

JOHN MARSHALL,
Director-General of Archæology.

April 5th, 1918.

Appendix A.

Special grants-in-aid.—The following grants-in-aid were sanctioned from the annual grant of one lakh :—

	Rs.
Bombay	5,000
United Provinces	2,359
Panjab	5,600
Burma	2,500
North-West Frontier Province	10,100
Delhi	11,400
Central India (Dhar State)	94
Conservation at Taxila	8,000
Exploration at Taxila	10,000
Conservation at Sanchi	12,000
Cataloguing Benares Manuscripts	900
Purchase of antiquities	5,000
Library	3,000
Indian Museum furniture	682
Archæological scholarship	450
Honorarium to Mr. F. H. Andrews for working on Stein collection of antiquities including furniture	3,048
Expenditure in connexion with Sir Aurel Stein's exploration	2,000
Director-General's Personal Assistant	4,100
Bahawalpur coins	1,391
Schwaiger's collection of antiquities	8,000
Publication of Bakshali Manuscripts	100
Lady Herringham's volume on Ajanta frescoes	2,700
Total	98,424

Appendix B.

Expenditure on the Archæological Department for the year 1916-17.

		Rs.
Southern Circle	Archæology	19,266
	Epigraphy	20,969
Western Circle		27,580
Eastern Circle		37,415
Northern Circle	Superintendent, Hindu and Buddhist Monuments	14,428
	Superintendent, Muhammadan and British Monuments	21,591
Frontier Circle		23,921
Burma Circle		33,774
Director-General of Archæology including Government Epigraphist and the Epigraphist for Moslem Inscriptions		81,585
Sir Aurel Stein's deputation		5,320
Total		2,85,849

APPENDIX B—*contd.*

Expenditure on conservation, etc., including grants-in-aid from Imperial Revenue.

			Rs.
Madras			23,794
Coorg			629
Bombay			42,400
Bengal			24,533
Bihar and Orissa		Rs.	15,360
United Provinces	Hindu and Buddhist Monuments	3,088	
	Muhammadan and British Monuments	42,215	45,303
Panjab	Hindu and Buddhist Monuments	5,522	
	Muhammadan and British Monuments	29,376	34,898
North-West Frontier Province			10,100
Delhi			41,121
Assam			1,698
Burma			24,539
Central India			7,345
Ajmer			2,502
Central Provinces and Berar			9,614
Conservation and exploration at Sanchi			12,000
Conservation and exploration at Taxila			23,000
Benares manuscripts			900
		TOTAL	3,19,736

Special Charges.

	Rs.
Antiquities	5,000
Library	2,996
Indian Museum furniture	682
Archæological scholarship	450
Honorarium to Mr. F. H. Andrews, including cost of furniture	3,048
Expenditure in connection with Sir Aurel Stein's explorations	2,000
Director-General's Personal Assistant	4,100
Bahawalpur coins	1,391
Schwaiger's collection of antiquities	7,933
Bakshali manuscripts	100
Lady Herringham's volume on Ajanta frescoes	2,700
Director-General's Annual Report	4,999
Epigraphia Indica	1,325
Honorarium to Dr. Sten Konow for editing *Epigraphia Indica*	1,000
TOTAL	37,724

Appendix C.

Drawings and photographs prepared by the Department.

		Drawings.	Photographs.
Southern Circle	Archæology	6	165
	Epigraphy	60	28
Western Circle		7	123
Eastern Circle		4	167
Northern Circle	Superintendent, Hindu and Buddhist Monuments	6	82
	Superintendent, Muhammadan and British Monuments	36	161
Burma Circle		27	150
Frontier Circle		2	231
Director-General of Archæology		11	145
	Total	159	1,252

APPENDIX D.

List of the negatives prepared by the Office of the Director-General of Archæology in India during the year 1916-17.

Serial No.	Place and District.	Subject.	Size.
1	Sanchi, Bhopal State.	Tope I, general view from N.-E.	$8\frac{1}{2} \times 6\frac{1}{2}$
2	"	" North gate, front view	"
3	"	" East gate, south pillar, Buddha walking on water .	"
4	"	" South gate, Chhaddanta Jataka	"
5	"	" East gate, middle bar showing Asoka's visit to the tree at Bodh-Gaya	"
6	"	" East gate, Buddha's departure from Kapilavastu .	"
7	"	" South gate, west pillar, panel just below the lowest lintel, inner face	"
8	"	" West gate, south pillar, front face, Mahakapi Jataka	"
9	"	" " " " "	"
10	"	" broken portion of the berm showing the bulge in the wall	"
11	"	" lion capital	"
12	"	Tope III, general view from S.-S.-E.	"
13	"	Temple 18, general view from E.-N.-E.	"
14	"	" 17 and 18, general view from E.-N.-E. . . .	"
15	"	" 17, general view from N.-N.-W.	"
16	"	" 40, general view from N.-W.	"
17	"	" 45, general view	"
18	"	Plan of the excavations	"
19	"	Tope II, general view from E.-N.-E.	"
20—25	"	" railing pillars	"
26	Taxila, Rawalpindi District.	Dharmarajika Stupa, general view from East . . .	"
27	"	" " " "	"
28	"	" " general view from N.	"
29	"	" " " " " N.-W.	"

APPENDIX D—*contd.*

Serial No.	Place and District.	Subject.			Size.
30	Taxila, Rawalpindi District.	Dharmarajika Stupa,		general view from S.-W. . . .	8½ × 6½
31	,,	,,	,,	bracket figures (480 and 799) . .	,,
32	,,	,,	,,	corner pillar (239)	,,
33	,,	,,	,,	,, ,, (238 and 239) . .	,,
34	,,	,,	,,	,, ,, ,, .	,,
35	,,	,,	,,	cornice (214)	,,
36	,,	,,	,,	pillar (792)	,,
37	,,	,,	,,	fragment of a sculpture with one letter of inscription (216) . . .	,,
38	,,	,,	,,	inscribed sculpture (896) . . .	,,
39	,,	,,	,,	,, ,, (463) . . .	,,
40	,,	,,	,,	relic casket (968)	,,
41	,,	,,	,,	,, ,, (967)	,,
42	,,	,,	,,	,, ,, (316)	,,
43	,,	,,	,,	miscellaneous objects (228, 569 and 760)	,,
44	,,	,,	,,	,, ,, (950, 544, 210 and 971)	,,
45	,,	,,	,,	heads (1019 and 460) . . .	,,
46	,,	,,	,,	headless figure (237) . . .	,,
47	,,	,,	,,	lion head (415)	,,
48	,,	,,	,,	copper objects (281 and 563) . .	,,
49	,,	,,	,,	,, ,, (283, 282, 280 and 255)	,,
50	,,	,,	,,	,, ,, (221, 332, 941, 56, 529, 387 and 278) .	,,
51	,,	,,	,,	,, ,, (832, 643, 952, 819, 864, 955 and 833) .	,,
52	,,	,,	,,	stucco heads (204, 579 and 1035) .	,,
53	,,	,,	,,	,, ,, (12 and 295) . . .	,,
54	,,	,,	,,	,, ,, (918)	,,
55	,,	,,	,,	,, ,, (187 and 188) . .	,,

Appendix D—*contd.*

Serial No.	Place and District.	Subject.	Size.
56	Taxila, Rawalpindi District.	Dharmarajika Stupa, stucco head (352)	$8\frac{1}{2}\times6\frac{1}{2}$
57	,,	,, ,, ,, ,, (1049)	,,
58	,,	,, ,, terracotta objects (294) . . .	,,
59	,,	,, ,, ,, ,, (696) . . .	,,
60	,,	,, ,, ,, ,, (720 and 590) .	,,
61	,,	,, ,, miscellaneous objects (781, 343, 1072, 752 and 1068)	,,
62	,,	,, ,, earthen jug (925)	,,
63	,,	,, ,, clay object (967)	,,
64	,,	,, ,, crucible (702)	,,
65	,,	,, ,, iron objects (386, 768, 130 and 545) .	,,
66	,,	,, ,, ,, ,, (17, 646, 796 and 359) .	,,
67	,,	Sirkap, general view of the city wall and bastion on west side of North Gate from N.-E.	,,
68	,,	,, detailed view of same from North	,,
69	,,	,, detail of city wall on the east of North Gate, view from North	,,
70	,,	,, general view of excavations on west of the gate from S.-E.	,,
71	,,	,, general view of excavations on east side of the gate from S.-W.	,,
72	,,	,, general view of block A	,,
73	,,	,, ivory object (10)	,,
74	,,	,, ,, ,, (504, 555 and 564)	,,
75	,,	,, miscellaneous objects (130, 931, 702, 149 and 602) .	,,
76	,,	,, terracotta objects (197 and 1182)	,,
77	,,	,, iron objects (302 and 1124)	,,
78	,,	,, ,, *pharua* (649)	,,
79	,,	,, ,, objects (229 and 868)	,,
80	,,	,, ,, ,, (302 and 312)	,,

APPENDIX D—*contd.*

Serial No.	Place and District.	Subject.	Size.
81	Taxila, Rawalpindi District.	Sirkap, iron objects (168 and 1072)	$8\frac{1}{2} \times 6\frac{1}{2}$
82	,,	,, ,, (407 and 1054)	,,
83	,,	,, ,, (161, 788 and 852)	,,
84	,,	,, stone relic caskets (202 and 208)	,,
85	,,	,, stone objects (1160 and 807)	,,
86	,,	,, stone plaque (871)	,,
87	,,	,, ,, ,, (277)	,,
88	,,	,, ,, goblet (846)	,,
89	,,	,, copper lotus (278)	,,
90	,,	,, ,, pan (1163)	,,
91	,,	,, ,, jug (889)	,,
92	,,	,, ,, objects (373, 164 and 262)	,,
93	,,	,, ,, (784, 105, 1063, 508, 1068, 709, 848, 481, 147 and 613)	,,
94	,,	,, ,, *handi* (1000)	,,
95	,,	,, ,, ,, (292)	,,
96	,,	,, ,, cup (170)	,,
97	,,	,, ,, lamp (864)	,,
98	,,	,, ,, ,, (249)	,,
99	,,	,, ,, objects (148, 566, 147, 5, 269, 182 and 148) .	,,
100	,,	,, ,, lid (233)	,,
101-106	Lucknow .	Panoramic view of Kaiser Bagh (copied from an old picture)	12×10
107	,, .	Punj Mahalla gate (copied from an old picture) . .	,,
108	,, .	Palace of Nawab Shujau-d-Daula (copied from an old picture)	,,
109	,, .	View from the opposite bank of the river Goomty . .	,,
110-117	,, .	Panoramic view of Kaiser Bagh (copied from an old picture).	,,
118-121	Lucknow Museum	*Ayagapatas* of Kushana period	$8\frac{1}{2} \times 6\frac{1}{2}$
122	,,	Lower half of a female statue, in red sand stone (inscribed).	,,

APPENDIX D—*concld.*

Serial No.	Place and District.	Subject.	Size.
123	Lucknow Museum	Inscribed slab containing image of *Aryabati* from Kankali mound, Mathura (early Kushan)	$8\frac{1}{2} \times 6\frac{1}{2}$
124	,,	Inscribed *Ayagapata* (Kushan) from Mathura (?) . . .	,,
125	,,	Fragment of *torana* architrave representing worship of a Jaina Stupa by *Suparna*, etc., from Mathura (?) . .	,,
126	,,	"Reverse" of a *torana* architrave representing a procession to a Jaina shrine, from Mathura (?)	,,
127	,,	Sculptured panel representing a group of musicians. (Reverse of 128.) From Mathura (?)	,,
128	,,	Sculptured panel representing *Naigamesa* or the goat god. From Mathura (?)	,,
129	,,	Fragment of a *torana* (from Kankali Tila), Mathura . .	,,
130	,,	Fragment of a *torana*, Mathura, reverse side . . .	,,
131	Indian Museum	Coins from Madras Museum— Nos. 1, 1*a*, 5, 7, 11, 13, 18, 36, 37, 39, 40, 46, 41, 42, 44, 52, 54	,,
132	,,	,, Nos. 58, 61, 64, 63, 67, 73, 79, 85, 102, 90, 107 . .	,,
133	,,	,, Nos. 122, 124, 126, 128, 127, 136, 138, 139, 163, 143, 157, 161, 168, 175, 176, 177	,,
134	,,	,, Nos. 183, 186, 188, 191, 193, 195, 197, 198, 199, 200, 201, 202, 204, 206, 207	,,
135	,,	,, Nos. 208, 212, 211, 213, 217, 221, 222, 218, 223, 226, 227, 230, 232, 233, 236, 239, 246 and 256 . .	,,
136	Srinagar, Kashmir	View of the Nala-i-Mar	12×10
137	,,	View in Chinar Bagh	,,
138	,,	Temple on Takht-i-Sulaiman hill from East . . .	,,
139	,,	Another view in Chinar Bagh	,,
140	Martand, Kashmir	Part of the peristyle of the Martanda temple . . .	,,
141	,,	Cella of Martanda temple with wings, from West . . .	,,
142	,,	,, ,, ,, ,, . . .	,,
143	Miscellaneous .	Bodhisattva and other antiquities in possession of Mr. A. Scott	$8\frac{1}{2} \times 6\frac{1}{2}$
144	,,	False niche with Mahaparinirvana in possession of Mr. A. Scott	,,
145	,,	Vishnu Image in possession of Mr. A. Scott . . .	,,

APPENDIX E.

Report of the Archæological Section, Indian Museum, 1916-17.

1. *Establishment.*—The undersigned as Superintendent, Archæological Survey, Eastern Circle, remained as Sir John Marshall's deputy in charge of the Archæological Section throughout the year except during the period of one month from 5th June to 5th July, when Mr. H. Panday, B.A., Officiating Superintendent, Archæological Survey, Eastern Circle, held charge in my place. Mr. Percy Brown, A.R.C.A., Principal, Government School of Art, Calcutta, remained in charge of the exhibition of the antiquities in the various galleries of this Section.

During Mr. R. D. Banerji's leave on medical certificate Mr. Muhammad Hamid, B.A., Archæological Scholar, officiated for him. There was no change in the ministerial staff.

2. *Leave.*—Mr. R. D. Banerji was absent on privilege leave from the beginning of the financial year up to the 24th April. Mr. Banerji again fell ill in May and was absent on leave on medical certificate from the 8th of June to the 8th of September.

3. *Library.*—One hundred and fifty-nine books were added to the library. Forty-five were purchased and the remainder received as presentations.

4. *Photographs.*—One thousand nine hundred and forty-three photographic prints were received during the year from the different circles of the Archæological Department as well as from the office of the Director-General of Archæology in India. The Duftry and Munshi Wahid-ud-din, the Markman, were engaged in mounting them in albums under the supervision of the Gallery Assistant.

5. *Galleries.*—(*a*) Mr. Percy Brown was engaged throughout the year in arranging exhibits in the new Archæological gallery with the assistance of Pandit B. B. Bidyabinod, the Gallery Assistant. The work was not finished at the close of the financial year.

(*b*) The new glass-case containing antiquities discovered around the great temple at Bodh-Gaya was removed from the centre of the Gupta gallery to the new Archæological gallery.

6. *Coin-room.*—Mr. R. D. Banerji, the Assistant Superintendent, remained in charge of the coin room throughout the year. The coin-room itself was closed under the orders of the Government of India from the beginning of the financial year to the 28th of February. Mr. Banerji was mainly engaged in selecting coins for the next volume of the coin catalogue and in receiving back coins from specialists, who were engaged in compiling the fourth volume of the catalogue of coins.

7. *Treasure Trove.*—The following finds of treasure trove coins were dealt with by Mr. R. D. Banerji during the year :—

(*i*) Two gold and fifty-six silver coins found in the Dhenkanal Estate, Orissa, and forwarded for examination by the Private Secretary to His Honour the Lieutenant-Governor of Bihar and Orissa :—

(*a*) Twenty-five silver coins found at Bhimnagarigarh on the Brahmani river.

(*b*) Two gold coins said to have been found in the same place.

(*c*) Fifteen silver coins found at village Mahapada of the Dhenkanal Estate.

(*d*) Sixteen silver coins found at various places of the Dhenkanal Estate.

(*ii*) Seventy-six silver coins found at Mohjama, Thana Paru, District Muzaffarpur.

(*iii*) Fifty-one silver and three copper coins found at Hajipur in the Muzaffarpur District.

(*iv*) Seventeen silver coins found at Id, Police Station Angara, District Ranchi.

(*v*) Seven hundred and ninety-one copper coins of the later Chahamana princes—Chahadadeva, Asalladeva and Ganapatideva found in the Gwalior State.

(*vi*) Seven silver coins found in the Khilchipur State in the Bhopal Agency.

(*vii*) Two silver coins found in the Gwalior State.

(*viii*) Two thousand four hundred and sixty-eight copper coins of Alauddin Muhammad Shah of Delhi, found in the jurisdiction of Thana Shikarpur, District Champaran.

The preliminary report on two thousand eight hundred and seventy-three silver punch-marked coins found at Patraha, District Purneah, was finished and submitted to the Government of Bihar and Orissa.

The Collector of Rajshahi sent two hundred and eighty-five silver coins, minted by the Hon'ble East India Company, in the name of the titular Emperor Shâh Âlam II, in the 19th year of the reign of that sovereign, at Murshidabad to be kept in this Museum for sale. As it was not likely that these coins would attract purchasers they were sent to the Master of the Mint, for disposal according to the directions of the Government of Bengal.

8. *Examination of Coins.*—Mr. R. D. Banerji examined twenty-five coins sent for examination by the Curator of the Australian Museum, Sydney.

A number of forged silver Ramachandra coins, medals of Medina Sharif and forged coins of Akbar were received for examination from the Sub-Divisional Officer, Tangail, District Mymensingh.

A number of silver coins of Akbar, Jahangir, Shahjahan and Aurangzeb were received from the Curator of the Prince of Wales' Museum of Western India, Poona, and examined.

9. *New Acquisitions.*—The following additions were made to the Archæological collections :—

(*i*) Miscellaneous—

(*a*) Two pieces of pottery found near the Sara Bridge. Presented by the Geological Survey of India.

(*b*) Three terracotta vases and three Ushâbtiû found at Tarkhun in Egypt. Presented by Professor N. F. Woodlands, M.A., of the Muir Central College, Allahabad.

(*c*) A stone image of Kalkin (identified by Pandit B. B. Bidyabinod, the Gallery Assistant) and the broken pedestal of a colossal image of Vishnu found near Shamshi Railway Station in the Maldah District of Bengal. Presented by the Eastern Bengal Railway.

(*ii*) *Coins.*—Altogether 565 coins were added to the cabinet during the year—51 gold, 485 silver, 28 copper and one billon. Out of these, 47 gold and 338 silver coins were purchased from the Bahawalpur State, partly from the Museum funds and partly from funds provided by me. Coins were received as presentations from the Governments of Bengal, Assam, Central Provinces, Bombay (through the Bombay Branch, Royal Asiatic Society) and the United Provinces. The Bikanir Durbar presented one silver and one copper coin found at Indpalsar, Raikan, Sub-Tahsil Dungargarh, and the Kurundwad Senior State presented six silver coins found within its jurisdiction.

A classified list of coins added to the cabinet is given below :—

Class.	Gold.	Silver.	Copper.	Billon.
Mediæval North Indian	4	..	..	..
Sultans of Delhi	..	1	..	1
Sultans of Bengal	..	44	..	..
Sultans of Jaunpur	..	..	6	..
Ahoms of Assam	..	1	..	..
Mughal	..	69	..	..
Kings of Oudh	..	11	21	..
Nadir Shah—Indian Mints	2	20	..	..
Durranis	45	318	..	..
Native States	..	16	..	..
French East India Company	..	5	..	..
Miscellaneous	..	..	1	..
Total	51	485	28	1

D. B. SPOONER,

Officiating Director-General of Archæology in India.

Simla :

23rd July 1917.



a. SHEIKHUPURA: THE BARADARI AT N. E. CORNER OF THE GREAT TANK, BEFORE CONSERVATION.

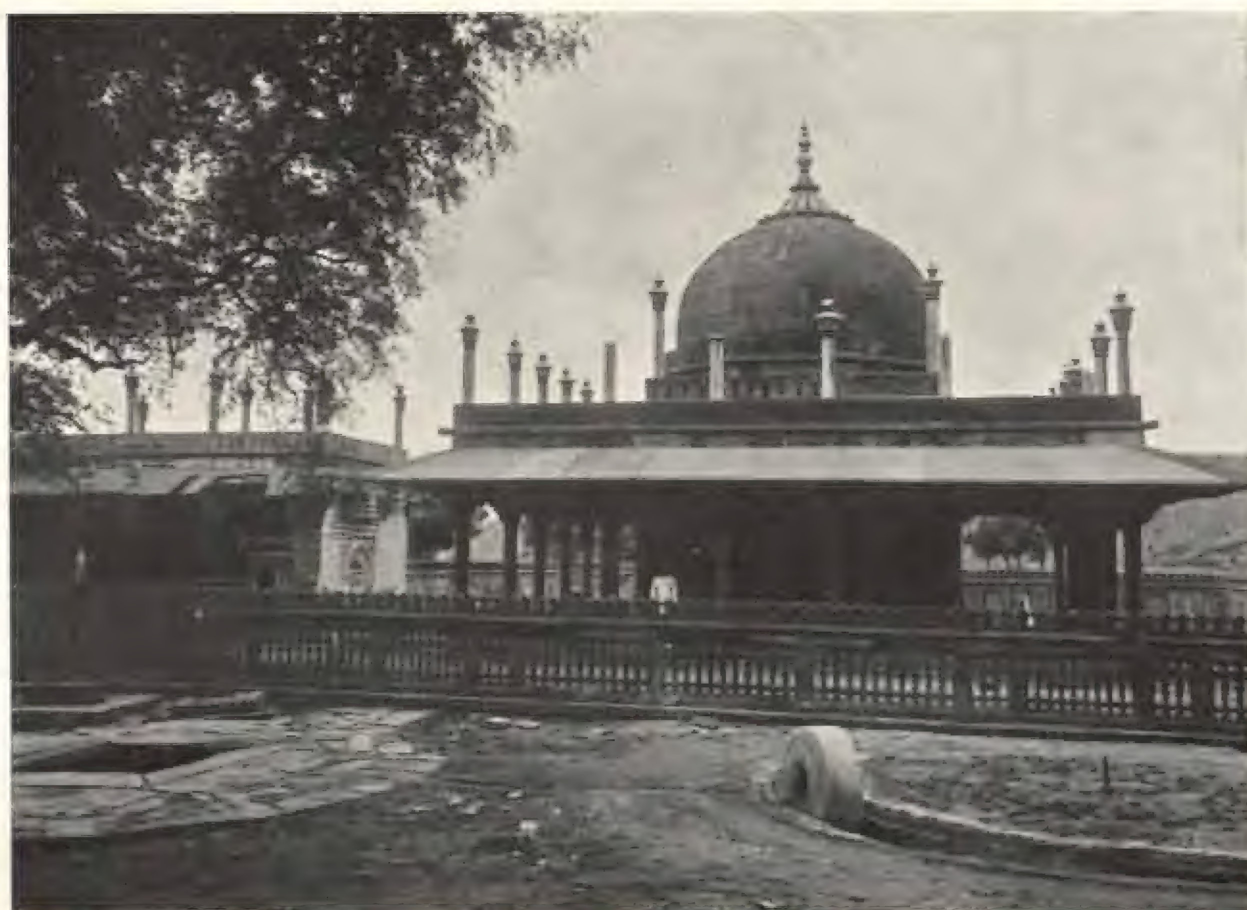


b. SHEIKHUPURA: THE SAME BARADARI, AFTER CONSERVATION.

Photo-engraved & printed at the Offices of the Survey of India, Calcutta, [illegible]



a. THE DHAKRI-KA-MAHAL NEAR SIKANDARAH, BEFORE REPAIR.



b. TOMB OF SHEIKH BAHAU-D-DIN AT FATEHPUR SIKRI, AFTER REPAIR.

Photo-engraved & printed at the Offices of the Survey of India, Calcutta, 1914.



a KRISHNA TEMPLE AT VIJAYANAGAR.



b KRISHNA TEMPLE AT UDAYAGIRI.

Photo-engraved & printed at the Offices of the Survey of India, Calcutta, [illegible]



a. RAMAPPA TEMPLE FROM N.-W.



b. GWALIOR: GUJARI MAHAL FROM S.

Photo-engraved & printed at the Offices of the Survey of India, Calcutta



a JAULIAN: VIEW OF STUPA COURTS, AFTER EXCAVATION, FROM N.-E.



b JAULIAN: STUCCO AND JEWELLED RELIQUARY.



c JAULIAN: STUCCO IMAGES IN CHAPEL.

Photo-engraved & printed at the Offices of the Survey of India, Calcutta, 1918.







a. *b.* *c.*

a, b, c. TERRACOTTA HEADS FROM USHKUR.

d. SIVA TEMPLE AT NARASTAN, FROM S.-W., AFTER EXCAVATION.

Photo-engraved & printed at the offices of the Survey of India, Calcutta, [illegible]



a. STATUETTE OF YAKSHA.



b. MAHADEVA TEMPLE AT JAMLI.



c. INSCRIBED IMAGE OF BODHISATTVA.



d. STATUETTE OF KUVERA.

Photo-engraved & printed at the Offices of the Survey of India, Calcutta. 1918.



a. EASTERN WING OF BUDDHIST VIHARA AT KHEJRIA BHOP.



b. CHAMUNDA TEMPLE AT GAZNIKHERI.

Photomechanical & printed at the Offices of the Survey of India, Calcutta.



a. Buddhist stupas excavated at Mirpur Khas.



b. Temple of Surya at Varman.

Photo-engraved & printed at the Offices of the Survey of India, Calcutta, [illegible]

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